New Jersey Department of Health and Senior Services

SARS Preparedness and Response Plan

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This document will be updated as NJDHSS obtains new information. The dates of the revisions will be indicated on page 1 of this plan.

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Updates

Date	Page	Topic
2-18-04		Web links updated and activated; Appendix G pages numbered

Appendices

A. The CDC SARS Plan

   The table of contents of the CDC SARS Plan appears in this appendix along with the titles of each of the seven supplements, including their appendices.

   CDC's SARS plan, "Public Health Guidance for Community-Level Preparedness and Response to Severe Acute Respiratory Syndrome (SARS)," can be found at http://www.cdc.gov/ncidod/sars/guidance/.

B. Glossary of Acronyms/Definitions

C. Emergency Preparedness and Response Triad

D. Five Planning Regions

E. Guidance Related to Blood Donations

F. CDC Influenza Activity Levels

G. NJDHSS Guidelines on the Management of Persons with Illnesses Suggestive of SARS

H. N.J.S.A. 25:4-2, Powers of State Department and Local Board

I. State of New Jersey Department of Health and Senior Services Administrative Order Declaring Isolation and Quarantine of Certain Persons

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K. Isolation and Quarantine Teams

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New Jersey Department of Health and Senior Services

SARS Preparedness & Response Plan

Executive Summary

Severe Acute Respiratory Syndrome (SARS) is a recently recognized, contagious respiratory illness associated with infection by a novel coronavirus. The original outbreak began in China in November 2002 and spread to more than two dozen countries in North and South America, Europe and Asia. Over 8,000 people became ill and almost 10% of those affected died. This outbreak led to widespread health, social and economic consequences.

This planning document has been designed to ensure that New Jersey is prepared to implement an effective response before an outbreak of SARS recurs. The response components in this plan will help minimize morbidity and mortality, and maintain the operation of essential community services in the event of an outbreak.

New Jersey's geographic and demographic characteristics make it particularly vulnerable to the importation and spread of infectious diseases, including SARS. It is the most densely populated state, a major transportation center, has a highly mobile population, and hosts large numbers of tourists.

The plan is organized to mirror the **Centers for Disease Control and Prevention's (CDC)** Draft "Public Health Guidance for Community-Level Preparedness and Response to Severe Acute Respiratory Syndrome (SARS)," October 10, 2003 (Appendix A). General information is provided in the "Core Document" and the "Supplements" include the specifics.

The CDC and **New Jersey Department of Health and Senior Services (NJDHSS)** SARS plans are dynamic documents. Since scientific knowledge about SARS is still evolving, references to websites (primarily the CDC) for the latest information appear in the plan. It is recommended that relevant website pages be printed out and kept with this document for future reference. It is also recommended that the same CDC websites be checked regularly for updates. A glossary of terms, which appear in **bold,** is in Appendix B.

New Jersey's recent experience with bioterrorism highlighted the necessity of rapid and accurate dissemination of information to both the Department's professional partners and the public. The Department's website will be emphasized as a coordinating resource for timely communication of vital information to health care providers, emergency responders, and public health professionals, as well as for status updates of benefit to the general public.

The plan was developed in close collaboration with partner organizations throughout the state and was reviewed by numerous individuals and organizations in the public and private sectors.

CORE DOCUMENT

I. Introduction

A. World Experience

SARS is a recently recognized, contagious, febrile lower respiratory illness that is associated with infection by a novel coronavirus, called **SARS-associated coronavirus (SARS-CoV)**. The prevailing hypothesis is that SARS-CoV crossed the species barrier between animals (civet cats and raccoon dogs) and humans through animal traders. SARS-CoV disease appears to have originated in China in November 2002, and then spread rapidly worldwide through air travel. Although sustained local transmission has not occurred in the United States, it has occurred in several countries, most notably, Canada (Toronto), China (Guangdong Province, Hong Kong Special Administrative Region of China, Shanxi Province), Taiwan, Singapore, and Vietnam (Hanoi). During March to July 2003, SARS spread to more than two dozen countries in North and South America, Europe, and Asia. According to the **World Health Organization (WHO)**, 8,098 people worldwide became sick with SARS during the course of this outbreak (November 2002-July 2003). Of those people who were ill, 774 died. In July 2003, incident cases were no longer being reported, and SARS outbreaks worldwide were considered contained.

Given past experience with respiratory viruses, it is possible that SARS may recur. It is imperative, therefore, that the **public health care (PHC) system** in the United States prepare for such a recurrence. Vigilance is critical to ensure rapid recognition and appropriate management of persons with potential SARS-CoV disease so that re-emergence can be recognized and transmission can be prevented.

Supporting materials can be found at the websites of the CDC and the Council of State and Territorial Epidemiologists: http://www.cdc.gov/ncidod/sars/ and http://www.cste.org/.

B. Toronto Experience

During the 2003 SARS outbreak in Canada, the province of Ontario had the greatest number of cases. SARS presented itself in two phases. The first phase, which peaked on March 26 had 27 deaths out of the identified 136 probable cases and 121 suspect cases. The second phase peaked on May 29 and had 17 deaths out of the 111 probable cases and 7 suspect cases.

Toronto, Canada's largest city (over 5 million population) and capital of Ontario, was the only North American city to experience an epidemic. Toronto's PHC infrastructure faced many challenges.

In the area of data management and coordination, there was a need for electronic capability for contact tracing, standardization of forms and protocols, coordination among the components of the PHC system (especially with infection control staff), clear designation of leadership, and the provision of up-to-date SARS information to local health care workers.

In the area of resources, there was a need for a well managed telephone hotline for the public, a special telephone reporting line for health care providers, centralized communication with the media, and hospital surge capacity. In addition there were issues of worker shortage and fatigue, and "**work quarantine**" for health care worker contacts; work quarantine was necessary to ensure sufficient staffing levels during the outbreak. Work quarantine was an exposure management tool for health care workers who had limited exposure to SARS. Workers were to travel alone to and from work, undergo temperature and general health monitoring upon arrival and departure from work, and remain at home when not at work. Also, the amount of staff required to do contact tracing was estimated at 60 public health nurses per 1000 contacts. **Personal protective equipment (PPE)** and thermometers were in short supply. Coordination of ancillary services for those quarantined at home was difficult.

Finally, **isolation and quarantine (I/Q)** brought an additional set of challenges. Using the term "voluntary" quarantine was a mistake since people thought it was optional. However, enforcement of quarantine at the beginning of the outbreak, by making public examples of the first few noncompliant cases and threatening criminal prosecution, set the precedent that it was a serious public health measure and resulted in good compliance.

C. United States Experience

In response to reports of increasing numbers of cases of an atypical pneumonia that the WHO identified as SARS, the CDC took several steps to alert U.S. health authorities at local and state levels in early March 2003.

CDC activated its **Emergency Operations Center (EOC)** on March 14, 2003, upon learning of several cases reported in Canada among travelers recently returned from Southeast Asia and their family members. The CDC:

- Issued its first health alert to hospitals and clinicians on March 15, 2003;
- Briefed state health officials on March 15, 2003;
- Investigated illness among travelers who may have passed through the U.S. after having potential exposure to people with the illness;
- Developed surveillance case definitions based on clinical and epidemiologic findings from the identified SARS cases worldwide;
- Prepared health alert cards to give to travelers returning from Southeast Asia;
- Prepared guidance to assist public health departments, **health care facilities (HCFs)** and clinicians in monitoring and identifying potential cases. Specific guidance materials were developed, targeting clinicians, schools, businesses, Americans living abroad, patients and their contacts, and travelers. In addition, SARS information was translated into several languages, including Chinese, Vietnamese and Spanish (all guidance documents available at http://www.cdc.gov/ncidod/sars/);
- Deployed CDC scientists to assist the WHO in the global investigation; and

- Analyzed and identified the causative agent for SARS, SARS-CoV, and developed tests for clinical specimens from case-patients.

As of July 29, 2003, the CDC reported 159 suspect and 33 probable SARS cases in the United States. Of these cases, laboratory-evidence of infection with SARS-CoV has been confirmed in only 8 persons, all initially probable cases, of whom 7 were attributed to exposure during international travel in a country with SARS transmission, with only limited secondary spread to close contacts such as family members and **health care workers (HCWs)**.

D. New Jersey Experience

After the CDC issued its notifications to state health departments regarding the first SARS cases, the NJDHSS immediately implemented several steps in response. The NJDHSS:

- Prepared its **Emergency Communications Center (ECC)** for activation, if necessary.
- Trained **Communicable Disease Service (CDS)** staff to handle inquiries from the public, health care providers, and local health departments.
- Implemented statewide enhanced passive surveillance for illnesses compatible with SARS illness (see this plan's section IV.B.1.c, "NJDHSS Enhanced Passive Surveillance for Human SARS Illness, 2003").
- Defined roles and responsibilities of CDS staff:
  - Clerical staff triaged calls and handled basic public health questions.
  - Public health physicians conducted case intakes/investigations. During the outbreak, these physicians met daily to review all cases and to determine appropriate follow-up for these cases.
  - Epidemiologists handled inquiries related to travel, infection control, and/or exposure management.
- Collaborated with **local health departments (LHDs)** and hospitals in investigations of suspect SARS cases.
- Collaborated with the New Jersey Department of Education to provide guidance to schools.
- Provided general SARS guidance to LHDs and hospitals.
- Participated in weekly conference calls with CDC.
- Assisted in CDC's supplementary investigations (e.g., airline contacts, health care workers, household contacts, natural history follow-up).
- Consulted with CDC on an as-needed basis.
- The NJDHSS **Public Health and Environmental Laboratories (PHEL)** provided licensed clinical laboratories with the most current CDC guidelines.

During mid-March to July 2003, NJDHSS received over 300 SARS-related phone inquiries. Approximately two-thirds of the inquiries were from LHDs, schools, private companies, and the general public. Approximately one-third of the phone inquiries were from health care providers; after follow-up with physicians, hospital infection control professionals, LHDs and consultation with the CDC, one confirmed and one suspect case were identified as of October 1, 2003. Clinical specimens from these cases were forwarded to CDC for SARS-CoV testing; laboratory-evidence of SARS-CoV was present in the one confirmed case; this individual survived. Data on cases were maintained in an MS Access database.

Many elements of NJDHSS' SARS-related activities worked well:

- NJDHSS' SARS-related activities helped to increase awareness among the PHC community to report suspicious illness to the state and local health departments and consequently has enhanced collaboration between hospitals, local health departments, and NJDHSS.
- The outbreak improved organization among NJDHSS staff so that guidance to the public, health care community and local health departments was provided in a timely and efficient manner.
- NJDHSS staff who handled inquiries related to travel, infection control, case reporting, medical concerns, and exposure management, had **epidemiology** or clinical training. Having these specialized skills was critical for several reasons:
  - Inquiries were answered appropriately and were handled from a public health perspective, mitigating public panic.
  - Suspicious illness reports could be triaged for clinical follow-up, i.e., based on clinical criteria and exposure history, reports were prioritized for immediate or routine follow-up.
  - Suspicious illnesses were followed up in a timely manner by NJDHSS, LHD and hospital staff.
  - **Surveillance** data were summarized and reviewed on a daily basis.
  - A database manager (a physician-epidemiologist) was critical to maintaining the relational database. This individual also checked daily data reports for consistency and did "troubleshooting" on the database, updating the data fields in the database as needed.
- The database linked surveillance and clinical follow-up data, including laboratory reports.
- NJDHSS utilized CDC-developed forms which provided a standardized data collection tool that was used statewide.

However, the SARS-related activities also posed many challenges:

- NJDHSS staff had to keep updated on evolving information and on the changing case definition, which in turn impacted on timely and accurate distribution of information to the public and to local PHC partners.
- Maintaining confidentiality of case-patients was challenging; some members of the public expressed anger and fear concerning non-disclosure of identifying information on case-patients.
- Surveillance activities were both time- and resource-intensive. Performing follow-up required persons with clinical and epidemiology training to:
  - Manage a database that changed (through the addition and modification of data fields to reflect the evolution of the outbreak) and understand the changes in the database to generate reports with useful summary data;
  - Prioritize which reports needed immediate follow-up; and
  - Understand disease epidemiology to provide useful information to community health care providers.

- CDC transitioned through several EOC teams; these transitions sometimes hampered accurate communication between CDC and NJDHSS staff.
- CDC laboratory diagnostics were inconvenient. Acute (collected at disease onset) and convalescent (collected at least 21 days after disease resolution) sera specimens had to be collected on each suspect SARS case to definitively rule out SARS-CoV infection; convalescent specimen collection was sometimes difficult to obtain due to some resistance from case-patients (e.g., "inconvenience," "no illness now") and from health care providers (e.g., "who will pay for this test?").
- Clinical specimen collection from local hospitals or outpatient facilities was difficult.
  - Obtaining convalescent specimens inconvenienced case-patients; health care providers had questions regarding reimbursement for performing venipunctures and transporting specimens.
  - Arranging logistics for LHD or hospital staff to deliver specimens was challenging.

II. Overview of Plan

A. Purpose

The purpose of this SARS plan is to provide a standardized protocol and terminology for the NJDHSS on detection and response to a SARS outbreak and to provide guidance to LHDs and HCFs in the development of their SARS outbreak plans. The response components outlined in this plan will help to minimize morbidity and mortality and maintain the operation of essential community services in the event of a outbreak. Key to the development of local SARS plans, is the coordination with the NJDHSS plan.

B. Development Process

A draft document was prepared by staff of the NJDHSS Communicable Disease Service. The draft plan was distributed electronically to solicit input from a large number of NJDHSS staff as well as PHC partners outside of NJDHSS such as: local health officers, **Local Information Network and Communications System (LINCS)** epidemiologists, hospitals, long term and primary care facilities, medical and public health professional associations, and the Departments of Law and Public Safety, Human Services, Education, Community Affairs, Corrections, Commerce, and Transportation.

During October 2003, these same individuals and organizations were invited to a statewide meeting to introduce the draft plan. Approximately 150 PHC partners attended. Coincidentally, the CDC released its draft plan as New Jersey's initial draft was nearing completion. Therefore, the final document was reformatted to mirror the CDC plan.

C. Objectives

The strategies, guidelines, and tools included in this document are designed to enable the PHC system in New Jersey to achieve the following objectives:

- Rapidly and efficiently identify SARS cases and their exposed contacts;

- Ensure rapid information exchange among clinicians, public health officials, and administrators of health care facilities about potential SARS cases;
- Rapidly and effectively implement measures to prevent the transmission of SARS;
- Continuously monitor the course and characteristics of a SARS outbreak and promptly revise control strategies as needed;
- Implement effective communication and education strategies for the public, the media, community officials, health care communities, and public health communities to ensure an appropriate response to SARS; and
- Coordinate and integrate SARS preparedness and response planning efforts with other preparedness plans and systems.

III. Approach

The foundation of the proposed approach is a set of fundamental elements on which preparedness and response activities are based. Examples of these basic response elements are:

- Surveillance for potential SARS cases or suspicious clusters of atypical pneumonia with appropriate diagnostic testing;
- Rapid isolation and appropriate management of potential SARS cases;
- Rapid and efficient identification evaluation, and monitoring of contacts;
- Issuance of travel alerts/advisories, screening of ill travelers at airports and other border control measures to prevent international spread; and
- Timely dissemination of communication messages to the PHC communities and the public.

These basic elements may be supplemented with enhanced control measures that might be needed to address an escalating outbreak, changing transmission patterns or characteristics, variations in individual compliance with public health control measures, uncertainties about the effectiveness of basic control measures, feasibility and acceptability of specific interventions, or political pressures. Possible enhanced activities might include:

- Establishment of designated sites for evaluation of possible SARS patients;
- Screening of incoming and/or departing passengers at airports and ports;
- Quarantine of close contacts of cases or of persons potentially exposed to SARS by their presence at a particular function, setting, or institution; and
- Closing schools, canceling large gatherings, or implementing other "snow day"-type measures for increasing social distance as temporary measures to slow transmission in an affected community.

A. Lessons Learned

The emergence of SARS provided a fresh illustration of the potential for a new disease to suddenly appear and spread, leading to widespread health, social, and economic consequences. Fortunately, the world also witnessed the power of traditional public health measures—including surveillance, infection control, isolation, and quarantine—to contain and control an outbreak.

- SARS is a serious, often fatal, infectious disease with the potential for rapid spread.

- The vast majority of febrile respiratory illnesses will not be SARS.
- Laboratory tests, although sensitive and specific, do not reliably detect SARS-CoV early in the course of disease.
- Clinical features of SARS are nonspecific, but diagnosis can be guided by a history of exposure risk.
- In the absence of effective drugs or a vaccine, SARS can be controlled by the rapid and efficient use of the basic public health control strategies of surveillance and containment.
- SARS transmission is neither regional nor national but rather confined to limited geographic – and even institutional – settings; response strategies must therefore reflect local characteristics and resources.
- SARS response activities can inundate PHC resources.
- The potentially substantial health, social, and economic impact of SARS requires a swift and bold response that is appropriate to the situation yet minimizes unnecessary disruptions and respects human dignity.

B. Anticipated Impact on New Jersey

New Jersey's geographic and demographic characteristics make it particularly vulnerable to importation and spread of infectious diseases, including SARS. It is the most densely populated state with a population of over 8.4 million people, including large populations of immigrants. In fact, New Jersey ranks 5th in the nation for immigrants arriving from other countries. Nearly half of New Jersey's population lives in the urban/suburban areas of the northeastern third of the state near New York City. New Jersey has more roadway per square mile of land than any other state and provides an important transportation route in the Washington, D.C.-Philadelphia - New York corridor with over 210 million vehicles traveling through this route per year. Air traffic includes Newark International Airport, which provides transportation to over 31 million passengers per year, nationally and internationally, and is the busiest airport in the tri-state area. New Jersey is also a major ocean transport center with several major shipping yards. There are over one half million commuters using the bridges, tunnels and train network systems connecting New York and New Jersey every day. Thousands of tourists visit Atlantic City's casinos and other New Jersey attractions each day. New Jersey is home to seven Federal Department of Defense military installations and eight U.S. Coast Guard bases.

At the present time, it is difficult to assess the SARS attack rate (e.g., percentage of the population that becomes clinically ill after exposure). During the only SARS outbreak the world has experienced, the number of cases was relatively low, and the case definition was revised several times. However, it is possible that the impact of an influenza outbreak may be potentially representative of a SARS outbreak. The NJDHSS has estimated that an influenza outbreak with gross attack rates of 15 to 35 percent could result in 500,000 to 1,500,000 outpatient visits, 15,000 to 35,000 hospitalizations, and 3,500 to 8,000 deaths.

Although influenza does not typically warrant resource-intensive isolation and quarantine measures, a SARS outbreak would require them. In the Toronto experience, the ratio of quarantined persons to cases was over ten to one. Demands on health services under these conditions could overwhelm the state's PHC system.

A SARS plan is needed to ensure that New Jersey is prepared to implement an effective response before an outbreak arrives. While preserving the public's health is of primary concern, consideration must be given to the impact on essential municipal, county, and state operations as well as the entire PHC system.

C. Assumptions

The following assumptions guide the development of this plan:

- A SARS outbreak in New Jersey will present a massive test of any emergency preparedness system. Advance planning could both save lives and prevent substantial economic loss.
- An effective response to a SARS outbreak will require the coordinated and committed efforts of a wide variety of private, public, and non-profit organizations.
- Although SARS emerged mostly from areas of Eastern Asia, an outbreak could emerge in New Jersey or elsewhere in the United States.
- There may be no more than several weeks between the time of the first SARS case identification and development into a full epidemic.
- Rapid-testing supplies for SARS and laboratory capacity for utilizing them may very well be insufficient.
- A SARS outbreak will pose significant threats to human infrastructure responsible for critical community services in health and non-health sectors, due to widespread absenteeism due to illness, isolation, quarantine, and fear.
- Effective treatment measures currently do not exist; supplies for supportive therapy may be in short supply.
- There may be critical shortages of health care resources such as hospital beds, protective masks and gloves, thermometers, and, potentially, morgue capacity.
- Dissemination of timely and accurate information about the outbreak is one of the most important facets of outbreak preparedness and response.
- Surveillance of influenza-like-illness will provide information critical to an effective response.
- Enhancement of traditional disease reporting mechanisms will provide information critical to an effective response.
- Containment of the initial SARS case-patients and prompt follow-up and management of contacts will be critical to prevent the spread of the disease.
- The federal government cannot be relied on to assume all costs for purchase of supportive therapies, testing supplies, vaccines and antiviral drugs (should they be developed), and related supplies.

D. CDC Outbreak Phase Definitions

The plan developed by the NJDHSS is based on the following phases of a SARS outbreak as defined by the CDC in its document, "Levels of Surveillance Preparedness Planning," which can be found in the CDC plan.

As the level of SARS-CoV transmission during an outbreak is dynamic, response activities, by necessity, must also be dynamic. The key to understanding transmission dynamics and knowing when to escalate the response at the local level is a surveillance system that provides ready access to timely information on the number of new cases, the likely source of exposure for cases, the number of cases not previously identified as contacts, and the number of contacts (prospective cases) with high-risk exposures to known cases.

Level 0 Lack of known SARS activity worldwide.
Level 1 Documentation of SARS activity with or without imported SARS cases; no 2nd or 3rd generation transmission or very limited 2nd generation transmission.
Level 2 Limited 2nd generation transmission in a well-defined setting with all cases linkable to other cases.
Level 3 Extensive 2nd generation transmission. Although some cases are not linked to known cases or cluster, containment strategies are still overall effective.
Level 4 Extensive 2nd and 3rd generation transmission in which a sizable proportion are not linked to known cases or clusters and containment strategies appear to be failing.

E. Responsibilities

SARS outbreak planning and response require special emphasis on certain functions, particularly those under the domains of health agencies at the federal, state and local levels. In the event that the State EOC is activated due to a SARS outbreak, these functions are essential components of the state's emergency response. Support and cooperation from the private sector are critical for the management of an outbreak.

Although jurisdictions will need to adjust the types and level of response measures to local conditions and resources, they will also need to coordinate with adjacent jurisdictions to ensure consistency among responses and minimize confusion or mistrust that may derive from inexplicable differences in outbreak control strategies.

1. Federal

The CDC is the primary agency at the federal level with SARS outbreak responsibilities, including:

- Monitoring surveillance nationally and worldwide, in coordination with WHO;
- Identifying and announcing the beginnings and terminations of the various phases of a outbreak;
- Assessing and enhancing supplies for diagnostic testing, supportive therapy, isolation and quarantine and coordination of public sector procurement;
- Developing guidelines for mass prophylaxis, should vaccines and anti-viral medications be developed, including adverse effects surveillance;
- Assuring liability protection for vaccine and antiviral manufacturers, and for persons who administer vaccines and antiviral medications as part of a SARS outbreak;
- Developing recommendations, guidelines, and information templates that can be adapted and used as needed at state and local levels;

- Developing outbreak planning training modules and table top exercise templates; and
- Enforcing foreign quarantine regulations through the CDC Quarantine Station at JFK International Airport in New York, which is responsible for international airports in New Jersey as well as New Jersey's seaports.

2. State Health Department

The NJDHSS is the primary agency in New Jersey with SARS outbreak responsibilities including:

- Coordinating statewide surveillance and epidemiologic activities, including feedback on the process during the surveillance period;
- Conducting case intakes/investigations as needed;
- Targeting of education and mobilization of health care and support personnel;
- In cooperation with regional federal quarantine stations, developing protocols for evaluation and management of arriving ill passengers;
- Providing laboratory services and reports to CDC;
- Distributing supplies and equipment as needed in a large outbreak;
- Communicating CDC updates to PHC partners;
- Developing state recommendations, guidelines and templates;
- Providing training/information for PHC professionals;
- Developing and implementing tabletop and functional exercises;
- Providing legal documentation through the courts for isolation and quarantine when necessary;
- Developing guidelines for mass prophylaxis, should vaccines and anti-viral medications be developed, including adverse effects surveillance; and
- Communicating with the public.

NJDHSS regional planners will be responsible for the regional execution of the "Emergency Preparedness and Response Triad" during an event (Appendix C). This triad is composed of the traditional public health, emergency management, and the health care delivery systems. The regional planners will work closely with representatives from LINCS agencies to ensure the local involvement of LHDs, HCFs, local/county emergency management, **Emergency Medical Services (EMS)**, and exercise coordinators. The LINCS agencies have the responsibility of integrating health care delivery, EMS, and public health systems, as well as providing standardized preparedness and coordinated response to SARS (including isolation and quarantine) and other public health emergencies. In the event of a large scale SARS outbreak (levels 3 and 4), the regional planners will coordinate with the LINCS agencies to ensure that resources are allocated appropriately within the region and shared among regions. This process will be done through the existing structures of the county and state **Offices of Emergency Management (OEM)**.

NJDHSS has divided the state into five planning regions that facilitate the planning of the PHC system response (Appendix D). These areas were developed based on several factors,

including population, population density, geography, political boundaries, and health resources (including number and type of hospitals and bed capacity).

3. LINCS Agencies

The 22 LINCS agencies are responsible for developing SARS planning documents to complement the state plan. There are 22 such agencies in New Jersey – one for each county (Cumberland and Salem are combined), plus the cities of Newark and Paterson. These plans should be developed in collaboration with the LHDs, HCFs and other PHC partners within their respective jurisdictions. Guidance for developing the plans is included throughout this document. The plans should follow the basic outline of the **Association of State and Territorial Health Officials (ASTHO)** and the **National Association of County and City Health Officials (NACCHO)** checklist and are to be provided to the State Regional Planners for review. In summary, each LINCS agency is responsible for the following within its locale:

a. Planning
   - Coordinate SARS planning and response activities with the LHDs through countywide governmental and community public health partnerships;
   - Define command and control;
   - Include SARS outbreak related materials in the local and county Emergency Management Plans;
   - Assess health and related resources and deficiencies (e.g., number of hospital beds for isolation, potential non-hospital facilities for isolation and quarantine, equipment and supplies, physicians, nurses, public health workers, support services) in cooperation with the LHDs and regional planners; and
   - In cooperation with the LHDs and regional planners, identify appropriate facilities and staffing for community isolation and quarantine facilities, mass prophylaxis sites, and off-site assessment centers.

b. Training
   - Train public health staff in preparation for a SARS event;
   - Provide information to health care and emergency response workers about SARS-related training opportunities; and
   - Conduct SARS preparedness drills and exercises in cooperation with the LHDs, hospitals and other HCFs, the county OEM, and the NJDHSS Exercise Unit.

c. Surveillance and Epidemiological Activities
   - Support the state surveillance and epidemiologic initiatives at the local level**,** including electronic reporting and case/contact tracing; and
   - Assist in the transport of clinical specimens to the state laboratory.

d. Communication
   - Maintain updated lists of key partners;
   - Maintain information exchange with the LHDs;
   - Maintain information exchange with LINCS agencies within region;

- Develop a comprehensive communications plan, including utilization of the LINCS system and the **Health Alert Network (HAN)**; and
- Provide SARS-related information and services for special needs populations affected by a SARS outbreak, as well as the public.

e. Isolation and Quarantine
- Be familiar with public health law as it relates to SARS;
- Assure that contacts are under observation for symptoms for 10 days after last exposure; and
- Coordinate the care and support services for individuals isolated at home.

4. Hospitals

Transmission of SARS in health care facilities was a major factor in the spread of SARS during the 2003 global epidemic. In areas with extensive outbreaks, the virus spread most readily among hospital workers caring for SARS patients, other patients, and visitors. In Toronto, 77% of the patients in the first phase of the outbreak were infected in the hospital setting, and half of all SARS cases in Toronto were in health care workers. Even in Hong Kong, where there was significant community transmission, 21% of all SARS cases occurred in health care workers. Factors that likely contribute to the disproportionate rate of transmission in health care settings include:

- a higher virus titer in respiratory secretions during the second week of illness when patients are likely to be hospitalized;
- use of ventilators, nebulizers, endotracheal intubation, and other droplet- and aerosol-generating devices and procedures; and
- frequent exposures of workers to patients, their secretions, and potentially contaminated environments.

The large number of hospital personnel who contracted SARS demonstrates the importance of early detection and infection control in limiting the spread of disease. In every region in which major outbreaks were reported, a substantial proportion of cases resulted from delays in clinical recognition and isolation of patients. SARS was also transmitted by infected visitors and by hospitalized patients with other medical conditions that masked the symptoms of SARS. Case recognition and implementation of appropriate precautions greatly reduced the risks of SARS transmission. However, even with appropriate precautions, there were isolated reports of transmission to health care workers in the settings of aerosol-generating procedures and lapses in infection control technique.

SARS transmission in a health care setting presents occupational and psychological challenges that, in the 2003 outbreaks, required heroic efforts to overcome. Experience also indicates, however, that early detection and isolation of cases, strict adherence to infection control precautions, and aggressive contact tracing and monitoring can minimize the impact of a SARS outbreak. The success of these measures depends on exhaustive planning, clear communication, collaboration among disciplines, authoritative leadership, and provision of relevant support.

The goals of preparedness and response plans in hospitals are to:

- Rapidly identify and isolate all potential SARS patients;
- Implement strict infection control practices to prevent transmission;
- Strengthen communications in hospitals and between hospitals and public health departments;
- Determine hospitals' surge capacities for patient isolation, including negative pressure rooms, equipment and supplies; and
- Report influenza-like illnesses, illnesses compatible with SARS, as well as required reportable diseases to public health authorities.

While NJDHSS is not requiring hospitals to develop separate SARS plans, it is expected that they will actively participate in the planning efforts of their LINCS agencies and will follow the CDC's recommendations, as referenced in this document.

5. Other Sectors

Voluntary compliance with guidelines and directives from governmental agencies is needed from other sectors, such as schools, colleges, **long term care facilities (LTCF)**, businesses, ambulatory care facilities, prisons, congregate living facilities, EMS, private medical practices and pharmacies. They should plan to:

- Cooperate with local public health officials in developing and updating local and county emergency response plans;
- Determine LTCF surge capacity for patient isolation, including negative pressure rooms, equipment and supplies;
- Report influenza-like illnesses, suspect and probable cases of SARS, as well as required reportable diseases to public health authorities;
- Report unusually large numbers of prescriptions/requests for antiviral agents;
- Provide information about SARS to populations they serve;
- Establish and implement early detection and isolation policies in clinical settings;
- Distribute and administer vaccines and antiviral agents (should they be developed) according to policies and priorities set by the state; and
- Assure safety of blood donations (Appendix E).

F. Resources

1. Federal - The CDC website http://www.cdc.gov/ncidod/sars/ is updated regularly with information for professionals as well as the public.

2. Professional
   a. CSTE – Council of State and Territorial Epidemiologists, http://www.cste.org/
   b. ASTHO – Association of State and Territorial Health Officials, http://www.astho.org/
   c. NACCHO - National Association of County and City Health Officials, http://www.naccho.org/
   d. IDSA – Infectious Diseases Society of America, http://www.idsociety.org/

e. ACHA - American College Health Association, http://www.acha.org/Sars_Guidelines.pdf

3. International
   a. WHO – World Health Organization, http://www.who.int/en/
   b. Health Canada, http://www.hc-sc.gc.ca/
   c. Ontario Ministry of Health, http://www.health.gov.on.ca/
   d. Hong Kong Department of Health, http://www.info.gov.hk/info/sars/eindex.htm
   e. Singapore Ministry of Health, http://www.gov.sg/moh/sars/

IV. Key Measures for SARS Preparedness & Response

Each section of this portion of the NJDHSS plan makes reference to the contents of the related supplement of the CDC document, "Public Health Guidance for Community-Level Preparedness and Response to SARS" (October 2003 version). Appendix A of this NJDHSS plan lists the supplements of the CDC plan.

A. Command & Control

CDC Supplement A: "Command and Control," available at http://www.cdc.gov/ncidod/sars/guidance/ provides a description of operational authority, legal authority, and the incident command and management system. The appendices include:

- State and Local Health Official Epidemic SARS Checklist: Are You and Your Jurisdiction Ready for Epidemic Severe Acute Respiratory Syndrome (SARS)?;
- Checklist of Legal Considerations for SARS Preparedness in Your Community; and
- Fact Sheet: Practical Steps for SARS Legal Preparedness.

NJDHSS and NJ Department of Law and Public Safety have jointly reviewed the existing legal authority for implementing steps anticipated to be necessary to contain and control an outbreak. It is further recognized that any such response must be a balance of both respect for individual rights and the need to ensure the public's protection from a communicable illness associated with substantial public panic. Two pre-eminent legal structures have been identified as fundamental to enabling a rapid and effective response to any such threat to the public's health:

- powers presently possessed by the NJDHSS and local boards of health by statute; and
- the NJ Domestic Security Preparedness Act.

Specifically, NJDHSS and local boards of health shall have the power to:

- define a communicable disease;
- declare an epidemic;
- require the reporting of communicable diseases;
- isolate and quarantine affected persons;
- remove infected persons to a suitable place;
- disinfect premises; and,
- remove and destroy property.

The declaration of a state of public emergency and subsequent actions and operations as outlined by the State Emergency Operations Plan and its protocols may offer broad based powers to the Governor and Commissioner of the NJDHSS to appropriate money, expedite contracts, hire temporary personnel, issue additional mandates, or otherwise act to protect the public's health. Thus, it is believed that New Jersey statutes combined with implementation of regulations and case law provide the necessary procedural safeguards which achieve a balance between public and private interests.

With specific reference to some of the most important and sensitive activities necessary for an effective response to a SARS outbreak:

- It is believed that there is sufficient legal authority for the implementation of isolation and quarantine programs. This includes the legal authority to establish "suitable places" for isolation and quarantine and the mandating of immunization, quarantine, or isolation.
- In the event that antimicrobial treatment for SARS-CoV infection becomes available, there will also be sufficient legal authority for distribution of mass prophylaxis.
- The potential emergency may generate the need for additional personnel to administer vaccines/mass prophylaxis. Presently, physicians, nurses and nurse practitioners are so authorized in accordance with their respective state professional boards. Additionally, physician's assistants may do so as well, under protocols established with a supervisory physician. Medical assistants and personal care assistants may administer vaccinations under the supervision of a registered nurse. Certain military personnel may have training as well to administer vaccinations.

B. Surveillance & Epidemiologic Activities

Note: The **Health Insurance Portability and Accountability Act (HIPAA)** of 1996 addresses the security and privacy of health information. This Privacy Rule continues to allow for the existing practice of sharing **protected health information (PHI)** with public health authorities that are authorized by law to collect or receive such information to aid them in their mission of protecting the health of the public. For detailed information, see http://www.cdc.gov/privacyrule/.

The following section describes surveillance and epidemiologic activities in preparation for and in the event of a SARS outbreak.

1. Current System

   a. NJDHSS Communicable Disease Service (CDS) Mission
      - The NJDHSS CDS is responsible for epidemiologic activities related to reportable communicable diseases as stipulated by N.J.A.C. 8:57 as well as public health issues and emergencies related to new emerging infectious diseases, such as SARS.
      - The NJDHSS, through an agreement with the New Jersey Department of Environmental Protection, provides an after-hours reporting system for public health emergencies, health-related incidents, and emergency telephone coverage

seven days per week (including 24 hour coverage on weekends and holidays). To reach the Communicable Disease Service, Monday-Friday, 8am-5pm, call 609-558-7500 or 609-588-3121; after hours/holidays/weekends, call 609-392-2020, and the staff member on call will be contacted.

b. LINCS Partnerships in Surveillance/Epidemiologic Activities
The 22 LINCS epidemiologists are required to build relationships with their jurisdictions' PHC partners (including, but not limited to, emergency departments, infectious disease physicians, infection control professionals, visiting nurse agencies, and hospital laboratories) and communicable disease investigators from other health departments located in their region, to communicate the state's reporting expectations.

c. NJDHSS Enhanced Passive Surveillance for Human SARS Illness, 2003
During spring 2003, NJDHSS implemented **enhanced passive surveillance** for syndromes compatible with SARS illness, as follows:
- NJDHSS distributed CDC SARS case definitions and guidance documents (including infection control measures, travel advisories/alerts, specimen collection protocols) via LINCS to LHDs and hospitals and requested that these agencies immediately report by phone illnesses compatible with the SARS case definition.
- NJDHSS CDS public health physicians, in collaboration with LHDs and hospital infection control professionals, reviewed suspect illness reports, requested follow-up case-patient information, recommended specific infection control precautions for case-patients and contacts, and coordinated testing of clinical specimens.
- Clinical specimens from patients who met case definitions were sent to the CDC for SARS-CoV diagnostic testing.
- Data were maintained and summary reports were generated in an MS Access database.
- During March to June 2003, NJDHSS received 106 reports of illnesses potentially compatible with SARS from health care providers and LHDs; of these, 1 laboratory-confirmed case and 1 suspect case were identified.

d. Other Current National & Statewide Surveillance Initiatives
NJDHSS participates in national influenza surveillance activities and has several statewide enhanced passive surveillance systems, including syndromic surveillance for human West Nile virus illness and **influenza-like illness (ILI)**, and surveillance for reportable communicable diseases. Several of these surveillance activities are described below.

- National Influenza Surveillance Activities: The Influenza Branch, CDC, conducts surveillance for influenza in the United States each year from October through mid-May. The four components of the national influenza surveillance system are:

- World Health Organization Collaborating Laboratory System
  Approximately 75 WHO collaborating virology laboratories and approximately 50 laboratories from the National Respiratory and Enteric Virus Surveillance System located throughout the United States report the total number of respiratory specimens tested and the number positive for influenza by type and subtype each week. A subset of the influenza viruses isolated is sent to CDC for antigenic characterization.
- 122 Cities Mortality Reporting System
  Each week, the vital statistics offices of 122 cities report the total number of death certificates filed and the number of those for which pneumonia was identified as the underlying cause of death or for which influenza was mentioned in any position. New Jersey cities participating in this system are: Camden, Elizabeth, Jersey City, Newark, Paterson, and Trenton.
- State and Territorial Epidemiologists Reports
  State health departments report the estimated level of influenza activity in their state each week to the CDC. As of September 2003, the CDC, in collaboration with state and local partners, has re-defined influenza activity levels as "no activity," "sporadic," "local," "regional," and "widespread," as specified by the ILI activity/outbreak and laboratory data criteria in Appendix F.
- U.S. Influenza **Sentinel Physicians Surveillance** Network
  Approximately 260 physicians around the country report each week the total number of patients seen and the number of those patients with ILI by age group. Approximately 50 New Jersey physicians currently participate in this system.

- NJDHSS ILI Surveillance
  With the assistance and cooperation of local health officers and the coordinating efforts of LINCS agencies, NJDHSS has recruited selected schools, sentinel physicians, and nursing homes statewide which report weekly absenteeism rates and flu-like illness rates, respectively. In addition, NJDHSS has requested all New Jersey hospital Emergency Departments to report weekly the flu-like activity that they are seeing.
  - All reporting schools, sentinel physicians, nursing homes, and hospital emergency departments participate in this surveillance voluntarily.
  - School, sentinel physician, nursing home, and hospital information is reported and transmitted to the NJDHSS by Thursday of each week. The information is tabulated and a report is generated by Friday of that week.
  - The number of schools and nursing homes selected were based upon population (1 per 100,000 population), with a minimum of four schools and four nursing homes per county. Many counties elected to include more than the requested number. The selection of a school or nursing home does not indicate that influenza or respiratory illness is more likely to occur there compared to other schools or nursing homes in the area.

- Schools are being asked to provide the rate of absenteeism, as well as the predominant reason for absenteeism (respiratory illness, gastrointestinal illness, etc.) occurring on Tuesday of every week.
- Nursing homes are being asked to provide the number of residents ill with respiratory or ILI on Tuesday of every week.
- Hospital Emergency Departments and sentinel physicians are being asked to provide the number of emergency department visits during a 24 hour period on or about Tuesday of each week and the number of illnesses seen that were due to respiratory ILI (excluding asthma or other chronic lung conditions).

- NJDHSS **Communicable Disease Reporting System (CDRS)**
  CDRS is a web-enabled, CDC-specification compliant application that is used to enter, update and track New Jersey's reportable communicable disease information. Along with the ability to enter patient cases in a real-time environment, CDRS system users (e.g., LHDs, hospitals) can also browse and search for cases by several parameters (e.g., name, disease, age, address, illness onset date), and receive data summary reports, including summary information on statewide disease trends. CDRS has been introduced in all 21 counties, including over 400 users from LHDs.

- NJDHSS Pharmacy Data Surveillance
  The NJDHSS utilizes data from the Realtime Outbreak and Disease Surveillance (RODS) project, an academic collaboration involving health departments, hospitals and medical centers, foundations, and industries throughout Pennsylvania and surrounding states. Currently, NJDHSS CDS staff receive RODS data pertaining to over-the-counter (OTC) pharmacy sales and monitor these data daily for surges in OTC sales that might suggest increased illness activity; sales data for the current five-day reporting period are compared to baseline sales from previous reporting periods. NJDHSS and LHD staff then investigate to determine possible causes of any surges. Approximately 50% of in-state pharmacy sales are captured in these data which are reported daily.

2. Planned System

   a. Reporting Requirements: SARS and Other Emerging Infectious Diseases
   Since SARS is not endemic, one case, even if only a "SARS report under investigation," would be considered an "outbreak" and would be reportable by state regulation N.J.A.C. 8:57. For additional information, please refer to this plan's section IV.D.4.c., "Legal Considerations - Reporting."

   b. Enhancements of current statewide surveillance initiatives
   - NJDHSS will continue to collaborate with CDC and maintain current activities related to ILI-surveillance.
   - NJDHSS will continue to receive data on reportable diseases via CDRS.

- NJDHSS will be incorporating current ILI-surveillance data into CDRS by 2004.
- NJDHSS will develop and implement active laboratory-based surveillance for influenza. LINCS agencies will be asked to designate an infection control professional in an acute care hospital in their region to submit a weekly surveillance swab for influenza testing from a profiled patient in their institution. This specimen will be assayed by the NJDHSS PHEL for influenza and typed for a more precise characterization of circulating influenza virus in New Jersey. This surveillance is anticipated to be implemented by 2004.
- In collaboration with local public health partners, NJDHSS will develop and implement hospital laboratory surveillance for respiratory syncytial virus. LINCS agencies will be requested to identify a primary care institution treating acute pediatric patients in their regions and to coordinate the weekly submission of a report of both the number of test runs for respiratory syncytial virus and the number of positive results and submit it to NJDHSS. This surveillance is anticipated to be implemented by 2004.
- NJDHSS will work with PHEL to develop a data interface to share laboratory results within CDRS. This interface will facilitate tracking cases to specimens.

c. Implementation of SARS-Specific Surveillance

- Activities related to SARS-specific surveillance prior to and after the identification of SARS activity are described below in section IV.B.3, "Clinical Issues in Surveillance".

3. Clinical Issues in Surveillance

Health care practioners are reminded to review criteria for diagnosis and management of SARS and are also reminded to immediately contact NJDHSS to report illnesses that are suggestive of SARS. In the absence of known SARS activity worldwide, health care providers should be vigilant for cases and clusters of respiratory infections that might signal the re-emergence of SARS. SARS is more likely to re-emerge in a setting outside the U.S. In the absence of known areas with SARS activity, U.S. surveillance efforts should focus on specific clinical syndromes in groups likely to be first affected by the re-emergence of SARS if re-emergence is not detected elsewhere. For guidance on screening among populations at possible higher risk for SARS illness, please refer to this plan's section B.5.b, "Surveillance and management of cases in the absence of SARS activity," and to this plan's Appendix G, "NJHDSS Management of Persons with Illnesses Suggestive of SARS."

The CDC SARS case definition is subject to change, based on evolving information about SARS activity worldwide, and the most current version can be found at http://www.cdc.gov/ncidod/sars/. At this time, CDC has adopted the **Council of State and Territorial Epidemiologists (CSTE)** December 2003 case definition (which also includes the clinical, epidemiologic, and exclusion criteria outlined in this plan), available in Appendix G.

Please note: Surveillance case definitions are to be used for identifying and classifying cases, both of which are often done retrospectively, for national reporting purposes. For many conditions of public health importance, action to contain disease must be initiated as soon as a problem is identified; in many circumstances**, appropriate public health action must be undertaken even though sufficient information is not yet available to determine whether cases meet the case definition.** Surveillance case definitions should not be used to guide clinical management or as the only criterion for identifying or testing patients who might have SARS or for instituting infection control precautions.

4. Surveillance Guidelines

These surveillance guidelines are based on experiences and recommendations generated from the 2003 SARS outbreak. Supporting CDC documents are available at http://www.cdc.gov/ncidod/sars/. The following is excerpted from CDC's "Public Health Guidance for Community-Level Preparedness and Response to SARS," Supplement B: "SARS Surveillance," available at http://www.cdc.gov/ncidod/sars/guidance/.

a. Rationale, Challenges & Assumptions

The key to controlling a SARS outbreak is prompt detection of cases and their contacts, followed by rapid implementation of control measures. Identification of SARS cases is the basic step in SARS prevention efforts, whereas contact tracing provides a means to focus case-finding and containment efforts on persons who are at high risk of SARS.

Two features of SARS pose challenges for SARS case surveillance. First, the early signs and symptoms of SARS-CoV infection are not specific enough to reliably distinguish SARS from other common respiratory illnesses. Second, existing laboratory diagnostic tests are not adequately sensitive early in the course of SARS-CoV illness. Therefore, risk of exposure is key to considering the likelihood of a diagnosis of SARS.

b. Objectives of Surveillance & Epidemiologic Activities

- General
  - Ensure early detection of cases and clusters of respiratory infections that might signal the global re-emergence of SARS.
  - If the re-emergence of SARS in confirmed, maintain prompt and complete identification and reporting of potential cases to facilitate control and management of the outbreak.
  - Identify and monitor contacts of SARS cases to enable early detection of illness in persons at greatest risk for disease.
  - Describe the spectrum of clinical signs and symptoms of possible SARS illness and identify any unexpected epidemiological features of the outbreak (e.g., unusual presentation, morbidity, mortality, incubation period, transmission, affected population).
  - Characterize the population at-risk.

        - Evaluate the characteristics and extent of the outbreak to develop the most effective containment strategies.
        - Monitor the epidemiology of the outbreak for analysis and communications purposes.
        - Manage data collected from all surveillance, epidemiological/clinical investigation, and contact tracing activities.
    - Case management
        - Establish the diagnosis and case classification of persons with illnesses compatible with SARS.
        - Impose isolation of case-patients.
        - Monitor the clinical course and outcome of case-patients.
    - Contact management
        - Perform initial identification of contacts of case-patients for tracing, quarantine, and surveillance activities.
        - Coordinate activities related to contacts of SARS case-patients.
        - Monitor health status of contacts.

5. Case/Contact Management Roles

The following describes NJDHSS, LINCS, and LHD staff and their roles in case/contact management related to SARS activities.

- NJDHSS Surveillance coordinators - epidemiologists who coordinate surveillance activities; act as liaisons to LINCS epidemiologists, NJDHSS Communications Office, and CDC; coordinate contact tracing activities between NJDHSS, LHDs and LINCS epidemiologists;
- (NJDHSS) Clinical/medical investigators - clinicians (RN, MD) who coordinate clinical investigations, collect data on suspected case-patients, perform initial identification of contacts of case-patients, conduct follow-up on suspected case-patients, establish case-patient classification (confirmed, probable, suspected, or not a case-patient) and recommend public health control measures;
- (Local Health Departments) Local Health Officers and LINCS Epidemiologists - facilitate surveillance activities in local region, assist in educating community health care providers and hospitals on surveillance activities, identify and locate contacts, monitor and follow-up on contacts;
- (NJDHSS) Contact tracing personnel - epidemiologists who identify, locate and follow-up on contacts, for counties that do not have LINCS epidemiologists;
- (NJDHSS and Local Health Departments) Data analysts - epidemiologists and other staff who maintain and manage data collected from surveillance, clinical investigations, and contact tracing; and
- (NJDHSS and Local Health Departments) Data entry clerks - clerical staff who enter collected data from surveillance, clinical investigation, and contact tracing.

6. Surveillance & Management of Cases

The following case surveillance and management guidelines are based on CDC's document, "Public Health Guidance for Community-Level Preparedness and Response to

SARS," Supplement B: SARS Surveillance, available at http://www.cdc.gov/ncidod/sars/guidance/.

a. Rationale

- Timely identification of suspect SARS cases is critical to containment of the disease. Case identification is based on the CSTE's case definition for SARS which delineates clinical, laboratory and epidemiologic criteria (updated December 2003, available at http://www.cste.org/).
- Specific surveillance activities should be guided by absence or presence of SARS activity worldwide, as specified below.
- Data on cases should be collected on standardized CDC case report forms (available at http://www.cdc.gov/ncidod/sars/guidance/B/index.htm).

b. Surveillance in the **Absence** of SARS Worldwide

The following are based on CDC's "In the Absence of SARS-CoV Transmission Worldwide: Guidance for Surveillance, Clinical and Laboratory Evaluation, and Reporting" available at http://www.cdc.gov/ncidod/sars/absenceofsars.htm. Also, refer to this plan's Appendix G for additional information.

- Assumptions

In the absence of SARS-CoV transmission worldwide, the goal of domestic surveillance is to maximize early detection of SARS cases while minimizing unnecessary laboratory testing, concerns about SARS-CoV, implementation of control measures, and social disruption. Early and efficient detection of SARS cases is not, however, a straightforward task. In the absence of known transmission worldwide, the overall likelihood that a person in the United States with fever and respiratory symptoms will have SARS-CoV disease is exceedingly low. Moreover, the non-specific clinical features of early SARS-CoV disease and the current lack of diagnostic tests that can reliably detect the virus during the first few days of illness pose challenges to finding SARS-CoV-infected persons during the predictable seasonal upsurge in respiratory infections.

Nonetheless, lessons learned from the 2003 outbreaks have identified three features of SARS-CoV disease that can be used to focus surveillance activities during the period of no transmission worldwide: 1) most patients infected with SARS-CoV develop radiographic evidence of pneumonia; 2) most SARS-CoV transmission occurs when patients are seriously ill and require hospitalization; and 3) most infected patients have an identifiable exposure to a known SARS-CoV case or a suggestive cluster of SARS-like illness.

- Activities

Surveillance coordinators and/or LINCS epidemiologists should actively contact major reporting sources and health care providers (hospitals, large clinics, or other designated SARS facilities) frequently to encourage timely reporting and to ensure that providers have updated surveillance guidelines.

In the absence of known SARS activity worldwide, given the features of SARS-CoV disease, the potential sources of recurrence of SARS-CoV, and the predilection for SARS-CoV transmission to occur in healthcare settings or to be associated with geographically focused pneumonia clusters, **surveillance coordinators and/or LINCS epidemiologists need to be vigilant in identifying patients who require hospitalization for radiographically confirmed pneumonia or acute respiratory distress syndrome without identifiable etiology AND who have one of the following risk factors in the 10-days before the onset of illness**:

- Travel to mainland China, Hong Kong, or Taiwan, or close contact with an ill person with a history of recent travel to one of these areas, OR
- Employment in an occupation associated with a risk for SARS-CoV exposure (e.g., healthcare worker with direct patient contact; worker in a laboratory that contains live SARS-CoV), OR
- Part of a cluster of cases of atypical pneumonia without an alternative diagnosis

Infection control practitioners and other healthcare personnel should also be alert for clusters of pneumonia among two or more healthcare workers who work in the same facility.

In the absence of known SARS activity worldwide, health care providers should report to NJDHSS or local health department (1) all persons who meet at least one of the three risk factors for exposure to SARS-CoV as outlined in the box below, (2) any clusters (two or more persons) of unexplained pneumonia, especially among healthcare workers, and (3) any positive SARS-CoV test result. In the absence of SARS-CoV transmission in the world, the **screening of persons requiring hospitalization for radiographically confirmed pneumonia for risk factors suggesting SARS-CoV exposure should be limited to adults,** unless there are special circumstances that make the clinician and public health personnel consider a child to be of potentially high risk for having SARS-CoV disease. During the 2003 global outbreaks, infants and children accounted for only a small percentage of SARS cases and had a much milder disease and better outcome than adults. Although information on SARS-CoV disease in pediatric patients is limited, the role of children in transmission is likely much less significant than the role of adults.

Case Detection

Severe respiratory illness in the context of a documented exposure risk is the key to diagnosing SARS-CoV disease. Providers should therefore consider SARS-CoV disease in patients requiring hospitalization for:

- Radiographically confirmed pneumonia or acute respiratory distress syndrome of unknown etiology, AND

- One of the following risk factors in the 10 days before illness onset:

    - *Travel* to mainland China, Hong Kong, or Taiwan, or close contact with an ill person with a history of recent travel to one of these areas, *OR*
    - *Employment* in an occupation associated with a risk for SARS-CoV exposure (e.g., healthcare worker with direct patient contact; worker in a laboratory that contains live SARS-CoV), *OR*
    - Part of a *cluster* of cases of atypical pneumonia without an alternative diagnosis

Infection control practitioners and other healthcare personnel should be alert for clusters of pneumonia among two or more healthcare workers who work in the same facility.

Finally, in the absence of known SARS activity worldwide, health care providers should use SARS-CoV testing judiciously and in consultation with local or NJDHSS public health officials, given that:

- The positive predictive value of a positive laboratory test in the absence of known SARS activity is extremely low; and
- False-positive tests will raise concerns unnecessarily.

b. Surveillance in the **Presence** of SARS Activity

- General
    - During a recognized outbreak, rapid updates of **public health care workers (PHCW)** are critical to the containment of the disease. A targeted distribution plan that directs information and education materials will be implemented to help address the needs of health care providers and local health officials.
    - All available technology will be used for communicating the status of the outbreak: LINCS email, NJDHSS website, blast/broadcast fax, telephone, Nextel phones/radios, and the hospital based 800 MHz radio system. The date and time will be included on all written updates, in order to avoid confusion in a rapidly changing situation.

- Special phone banks at the ECC will be established to receive calls from PHCWs. Conference calls, as needed, will be arranged with NJDHSS, CDC, LHDs, hospitals and emergency responders.

- Activities

  - In the presence of SARS activity, surveillance efforts by NJDHSS and local surveillance coordinators and/or LINCS epidemiologists would be modified to incorporate available risk factor information (particularly geographic transmission pattern). The scope of surveillance activities in specific jurisdictions may differ substantially depending on the extent of disease both within the specific community and within local HCFs or institutions. NJDHSS and LHDs, in collaboration with CDC, will conduct ongoing analysis of surveillance data to inform subsequent decision making regarding the need to implement or discontinue various elements of surveillance.
  - HCFs should consider implementing surveillance activities as recommended in CDC's Public Health Guidance for Community-Level Preparedness and Response to SARS, Supplement B: SARS Surveillance, available at http://www.cdc.gov/ncidod/sars/guidance/.
  - NJDHSS, in collaboration with LHDs, will receive reports of suspect illnesses and collect initial and follow-up data on suspected case-patients.
  - NJDHSS and LHDs should provide periodic summary reports of surveillance data to reporting sources.
  - NJDHSS will share surveillance data regularly with neighboring states and CDC.

7. Contact Management

The following contact management guidelines are based on CDC's document, "Public Health Guidance for Community-Level Preparedness and Response to SARS," Supplement B: "SARS Surveillance," available at http://www.cdc.gov/ncidod/sars/guidance/.

a. Rationale

- Contact identification is an urgent task when investigating SARS case-patients since monitoring of close contacts as soon as possible following exposure may prevent further spread of the disease and allows early recognition of illness in persons at greatest risk. This strategy was used to contain SARS transmission in parts of Asia and Toronto.
- Infectiousness in SARS patients appears to begin with the onset of clinical illness. Although the exact duration of infectiousness is not known, it is recommended that patients with SARS avoid contact with other persons for up to 10 days after resolution of symptoms. Contact tracing is the systematic identification of persons who may have been exposed to patients with SARS-CoV during the infectious period. The extent and timing of a contact

investigation may depend on the index of suspicion and available resources, with immediate investigation warranted for newly identified confirmed or probable cases and a limited or delayed response for potential SARS patients with ambiguous clinical presentation and less convincing SARS exposure.

b. General Activities

- NJDHSS will designate a coordinator of contact management activities, who will also manage out-of-state contacts; similarly, LHDs should consider designating a staff member(s) to coordinate contact management activities on a local level and to liaison with NJDHSS.
- NJDHSS and **Local Case /Contact Management Teams (LCCMT)** must use appropriate PPE if and when interacting closely with contacts. The LCCMT will be responsible for developing and providing the systems needed for medical, social, and psychological monitoring and support for individuals being isolated or quarantined. (See section IV., D., 5., b.)
- LHDs must notify NJDHSS if contacts live out-of-state or have left New Jersey; NJDHSS will then report the contacts to the CDC and/or appropriate state health departments, as needed.

c. Contact Tracing Activities

- As soon as possible, NJDHSS and LCCMTs must perform initial identification of contacts of SARS patients, including household contacts (including regular household visitors and persons who work in the home).
- LCCMTs must interview each contact of a SARS case-patient. Use work and school contact numbers, telephone directories, voting lists, neighborhood interviews, site visits, "hangouts," etc., to trace contacts when contact information is unknown or incomplete. If contacts cannot be found through these mechanisms, other sources for notification of potential contacts, such as media announcements, may have to be considered. **Each contact must be interviewed to confirm contact with SARS case-patients, to determine the presence or absence of symptoms in the contact and to identify additional contacts that may not have been listed by the case-patient.**
- Each contact should be provided instructions regarding ongoing health monitoring, including directions for seeking medical care.
- NJDHSS and LCCMTs should instruct contacts about voluntary or mandatory restrictions on their activities to prevent the spread of SARS. The need for such restrictions will depend on several factors, such as the nature of exposure to the case, dynamics of the outbreak at that particular time and place, and availability of resources.
- If the contact does **not** have fever or symptoms, place the contact under surveillance, so that if he/she develops fever or symptoms, he/she is immediately isolated and evaluated and does not expose other persons. Contacts who do not have fever or symptoms at the time of interview must remain under **active surveillance** for 10 days after their last contact with the

SARS case-patient. Asymptomatic contacts generally do NOT need to be quarantined and do NOT need to limit their activities; however if surveillance indices demonstrate increased SARS activity in the community, quarantine precautions might be implemented under NJDHSS administrative orders.

- If the contact has fever or is symptomatic, the contact should be assessed according to CDC's Supplement B or NJDHSS plan Appendix G. If the contact fully meets the SARS case definition, he/she should be interviewed as a **"SARS Report Under Investigation" (RUI)** (See CDC Supplement B or NJDHSS plan Appendix G), medical evaluation should be recommended, isolation/infection control precautions should be implemented, and his/her contacts should be identified and interviewed.

d. Contact Information Management Activities

- LHDs will record summary information from all contacts monitored, including name, age, relationship to the case-patient, and health status.
- The LCCMTs will establish methods for daily reporting with the contact, including methods for daily tracking if the contact does not have access to a home telephone.
- Standardized forms for contact surveillance are being developed by CDC and will be available at http://www.cdc.gov/ncidod/sars/guidance/B/index.htm. They include a temperature/symptom log for contacts and a daily reporting log for public health workers. During the surveillance period, contacts must monitor and record their temperature/symptoms.
- LCCMTs staff assigned to monitor the health status of contacts will answer questions of contacts under surveillance, monitor their health status, and refer for in-home follow-up any contacts who fail to report in and cannot be contacted by telephone. The LCCMTs also will manage requests for ancillary services in the home (e.g., food, medicine, emergency home care needs such as plumbing and electricity). A larger concern will be finding replacements for symptomatic contacts who are caregivers and are unable to identify alternate caregivers. These issues are addressed in the isolation and quarantine section.

8. Data Management

Statewide data on all case-patients and contacts of case-patients must be managed and maintained at NJDHSS to ensure data consistency/integrity and to facilitate data sharing with LHDs and CDC.

NJDHSS, LINCS agencies, LHDs, and health care providers should use the same data collection forms to ensure that appropriate and standardized data are obtained. These forms, developed by CDC, include the SARS Case Report Form and SARS Contact Report Form (available at http://www.cdc.gov/ncidod/sars/guidance/).

As of October 2003, CDC, in collaboration with CSTE, the **Association of Public Health Laboratories (APHL)**, and NACCHO, is currently developing a web-based SARS data

management system where authorized users can directly enter case-patient and contact data; these data will also be stored at CDC, and standard reports and daily downloads of data will be provided to state and local users. NJDHSS anticipates receiving specifications for this data system and is developing a database to provide electronic upload of these SARS data to CDC.

- Hardware should include laptops to facilitate data collection in the field, personal computers at NJDHSS headquarters, and printers.
- NJDHSS, in collaboration with LHDs, will clean and maintain data by identifying and reconciling duplicate records in the SARS database, organize and maintain hard copies of all collected data, and plan redundant backup systems for the SARS database.

C. Isolation & Infection Control in Health Care Facilities

CDC's "Public Health Guidance for Community-Level Preparedness and Response to SARS," Supplement C: "Preparedness and Response in Healthcare Facilities," provides a description of considerations for HCF preparedness, including education, communication, and control measures. The appendices include:

- SARS Response Matrices for Healthcare Facilities;
- Prevention of SARS-CoV Transmission in Healthcare Settings: Consolidated Infection Control Guidance;
- Algorithm for Evaluation and Management of Patients Hospitalized with Radiographic Evidence of Pneumonia in the Absence of Known SARS Activity Worldwide;
- Algorithm for Management of Fever or Respiratory Symptoms in the Presence of SARS Activity Worldwide; and
- Checklist for SARS Preparedness in Healthcare Facilities.

1. General Guidance

All HCWs, both professional and non-professional, are expected to follow strict infection control practices for the prevention of standard, contact (including droplet) and airborne infections when in contact with any patient with a febrile, respiratory illness. Important infection control measures are covered in CDC Supplement C: "Prevention of SARS-CoV Transmission in Healthcare Settings: Consolidated Infection Control Guidance" which can be found at http://www.cdc.gov/ncidod/sars/guidance/.

- SARS provides a reminder of the risks of nosocomial transmission of respiratory pathogens and an opportunity to improve overall infection control in HCFs. During the 2003 outbreak, public health authorities quickly recognized the importance of infection control as the primary means for containing SARS. All HCFs need to reemphasize the importance of basic infection control measures for the control of SARS. Hand hygiene educational materials for HCWs may be accessed at http://www.cdc.gov/handhygiene/.

- Experience has shown that rigid adherence to infection control procedures (see http://www.cdc.gov/ncidod/hip/ISOLAT/Isolat.htm) is essential in controlling outbreaks of SARS and that even minor lapses in technique can lead to transmission.

- In most cases, it appears that contact and droplet precautions along with eye protection have been effective in preventing SARS transmission. However, airborne spread cannot be ruled out and may be particularly important in those who are shedding large quantities of virus (e.g., those who have infected other people) or in certain droplet- and aerosol-generating medical procedures. Therefore, NJDHSS recommends that a combination of standard, contact (including droplet) and airborne precautions be followed when in contact with patients with febrile, respiratory illness. Guidelines can be found at http://www.cdc.gov/ncidod/sars/infectioncontrol.htm.

- Detailed information on fit testing of N-95 respirators can be found at http://www.osha.gov/SLTC/etools/respiratory/oshafiles/fittesting1.html. Employers are reminded that the Occupational Safety and Health Adminstration (OSHA) requires annual fit testing for designated direct care employees.

- Many viral and some bacterial respiratory pathogens (e.g., influenza, adenovirus, respiratory syncitial virus, Mycoplasma pneumoniae) share transmission characteristics with SARS-CoV and are frequently transmitted in health care settings. NJDHSS recommends emphasizing the importance of adopting **"universal respiratory precautions" (URP)** to help decrease transmission of SARS and other respiratory pathogens (based on CDC's "universal respiratory etiquette strategy" as outlined in CDC's "Public Health Guidance for Community-Level Preparedness and Response to SARS," Supplement C). URP can decrease the risk of transmission from unrecognized SARS patients and also control the spread of other, more common, respiratory pathogens.

- Infection control should begin before a patient enters a medical facility. Educational signs posted outside ambulatory care offices and hospital Emergency Departments will explain to patients the importance of surgical masks in case of respiratory symptoms. To implement URP, provide surgical masks or tissues to all patients presenting with respiratory symptoms, follow hand hygiene recommendations, use contact precautions (gown and gloves), place patients with respiratory symptoms in a private room or cubicle as soon as possible, and implement use of masks (N95 preferred over surgical masks) and eye protection by health care personnel during contact with patients with respiratory symptoms. Additional components of URP are available in CDC's Supplement C: "Preparedness and Response in Healthcare Facilities," available at http://www.cdc.gov/ncidod/sars/guidance/.

- The CDC will be developing slides and posters on proper use of PPE in HCFs. These materials will be made available through http://www.cdc.gov/ncidod/sars.

- For instructions on what actions PHCWs should take after an exposure, go to http://www.cdc.gov/ncidod/sars/exposureguidance.htm. For instructions to give to visitors and patients who had possible exposure to a SARS patient, http://www.cdc.gov/ncidod/sars/exposuremanagement.htm.

2. Hospitals

- Hospitals should prepare a system for tracking patients and visitors to emergency departments, which can be implemented when instructed to do so by NJDHSS. Hospitals also should review their policies to be sure they include a provision to restrict visitors, if that becomes necessary.

- Some hospitals in the state routinely operate at or slightly above bed capacity. In view of this situation, it would be difficult for these facilities to expand to accept patients except for emergency treatment. As part of their disaster planning, hospitals should have an area to receive disaster victims that would temporarily expand capacity. These receiving areas are commonly lobby- or cafeteria-type spaces that would be usable only for a brief period of time. However, because of the requirement for strict infection control for SARS, these spaces may prove insufficient.

- In determining hospital capacity for SARS, it is important to assess the number of negative pressure rooms and the ability to **cohort** potential SARS patients (see CDC Supplement C).

- In preparation for a SARS outbreak, hospitals should also include patient evacuation as part of their plans as well as provisions for alternate facilities. The primary guidance for establishing and maintaining emergency facilities is the **American Red Cross' (ARC)** Disaster Services Regulations. Official Aeromedical Regional Evacuation Points (AREPs) in New Jersey include Newark Airport, Morristown Airport, Atlantic City International Airport, Milltown Airport and Cape May County Airport.

- Among hospitals capable of rapid expansion are the military hospital at Fort Monmouth (Red Bank), the Veterans Administration hospital in East Orange, and some hospitals in the urban areas of northern New Jersey. The number and location of beds available in acute care facilities change daily. The 31 Advanced Life Support (ALS) Communications Centers provide an important service by monitoring the bed status of hospitals in their service areas. These centers also monitor hospital bypass and divert status and report this information to the pre-hospital providers (e.g., EMS, etc.), and this information is provided to the County Emergency Medical Service Coordinators to ensure optimum patient distribution.

- The NJDHSS Division of Health Emergency Preparedness and Response is responsible for informing the State Epidemiologist of any changes in state

emergency response protocols, which would impact on emergency response to a SARS outbreak.

3. Long Term Care Facilities/Non-Acute Care Facilities

In an outbreak situation, it may be expected that LTCFs will increase their level of care, thus providing the urgent care in their facilities while avoiding transfers to already overwhelmed acute care facilities. In preparation for a SARS outbreak, LTCFs should also include patient evacuation as part of their plans. Patients in need of lower levels of care may be transferred to facilities elsewhere in New Jersey.

4. Outpatient Setting

- URP should be implemented in all medical settings. Once a case of SARS is diagnosed in the U.S., HCFs must institute procedures whereby patients with respiratory illnesses are identified prior to entering the facility and are given masks to wear as a precaution; records should be kept by office staff with names and contact information for all people who enter the office; and office staff should wear masks and strictly follow infection control guidelines for droplet infections.

- Once a case is diagnosed in the community, HCFs should institute procedures whereby patients with respiratory illnesses are screened for SARS by phone and directed to emergency departments if SARS is suspected. If SARS is not suspected, patients with respiratory illnesses should be given masks to wear; records should be kept by office staff with names and contact information for all people who enter the office; and office staff should wear masks and strictly follow infection control guidelines for droplet infections.

- All health care personnel should wear N-95 respirators while taking care of patients with suspected SARS. In addition, health care personnel should follow URP: hand hygiene, contact precautions (e.g., use of gown and gloves for contact with the patient or their environment), and eye protection for all patient contact.

- To facilitate the identification of patients who may have SARS in ambulatory care settings, see "III. Infection Control in Healthcare Facilities" at http://www.cdc.gov/ncidod/sars/guidance/I/index.htm.

5. Pre-Hospital Emergency Care & Ground Transport

Ground emergency medical services (EMS) who move patients to medical facilities for further assessment and care need to know how to manage suspect SARS patients while ensuring the safety of patients and transport personnel. In addition, signs should be placed in ambulances directing notification of the hospital Emergency Department in advance of bringing in a patient with potential SARS.

The CDC has developed recommendations which are based on standard infection control practices and available epidemiologic information regarding the transmission of SARS (see "IV. Infection Control for Prehospital Emergency Medical Services (EMS)" http://www.cdc.gov/ncidod/sars/guidance/I/index.htm). This CDC guidance document includes information on infection control, mechanically ventilated patients, clinical specimens, waste disposal, cleaning and disinfection of vehicle and reusable equipment, and follow-up of EMS personnel who transport suspected SARS patients.

General considerations include:

- Using the minimum number of EMS personnel;
- Notifying the receiving facility prior to arrival; and
- Contacting appropriate local, state, and federal health authorities to have questions answered. The NJDHSS CDS numbers during business hours are 609-588-7500 and 609-588-3121. The NJDHSS CDS number after business hours is 609-392-2020. The CDC 24-hour response number is 770-488-7100.

D. Community Containment

1. Purpose

The purpose of this section is to provide guidance on effective containment strategies during a SARS outbreak. This guidance should be used to develop detailed local implementation plans based on the characteristics of the local outbreak and health care and public health resource capacity.

This protocol is designed to be used in conjunction with CDC's "Public Health Guidance for Community-Level Preparedness and Response to SARS," Supplement D: "Community Containment Measures, Including Non-Hospital Isolation and Quarantine," available at http://www.cdc.gov/ncidod/sars/guidance/ It should also be used in conjunction with other federal emergency plans such as Federal Emergency Management Agency (FEMA). The FEMA plans can be found at http://www.fema.gov/.

Guidance for community-based isolation refers to isolation (the act of separating of ill persons from healthy persons and restricting their movements to stop the spread of illness) outside of hospital/health care facility settings; hospitals/health care facilities will need to follow isolation and infection control guidelines as specified in CDC, "Interim Guidance on Infection Control Precautions for Patients with Suspected Severe Acute Respiratory Syndrome (SARS) and Close Contacts in Households" at http://www.cdc.gov/ncidod/sars/ic-closecontacts.htm.

2. Planning Assumptions

- The primary method of control for SARS may be individual, population-specific or geographic quarantine.

- Hospitals or medical centers will be used for individual isolation in a Level 1 event where the outbreak is contained and case numbers are small.

- Community responses for isolation and quarantine procedures will be used as the event escalates to a level 2, 3 or 4. Community response measures will be initiated dependent upon numbers of individuals requiring I/Q and transmission patterns. These measures will be initiated based upon the recommendations of the NJDHSS State Epidemiologist.

- If needed, the NJDHSS Commissioner, in coordination with the Director of the State OEM will request activation of the State Emergency Operation Plan by the Governor.

- I/Q of an individual will be the least restrictive means needed to protect the public's health.

- Voluntary home-based I/Q is the most common approach and results in high compliance. However, for non-compliant individuals, legal procedures to expeditiously enforce I/Q should be in place.

- The largest cohort requiring monitoring during an outbreak will be asymptomatic contacts of SARS cases. Asymptomatic contacts will be monitored for temperature increase twice a day and respiratory symptoms, without restrictions to their daily activities. A process outside the I/Q effort will need to be in place to monitor these individuals (see Appendix G, "Management of Persons with Illnesses Suggestive of SARS"). Asymptomatic individuals may need to be quarantined in a large scale event (Levels 3/4).

- Under New Jersey state law each municipality maintains an Emergency Operation Plan that defines how municipal resources will be used in a time of emergency. During an outbreak, response resources may require the activation of Municipal and County Emergency Operation Plans to include interlocal agreements. Interlocal agreements should clearly outline the use of LINCS agencies and LHD staff to provide surge capacity essential to I/Q procedures.

- The I/Q Plan should be incorporated as an appendix to the local and county Public Health Annex of the Emergency Operation Plan.

- Preserving the public's trust will be critical to an effective and orderly I/Q process.

- Effective communication about I/Q policies and procedures is the key to ensuring and preserving the public's trust.

3. <u>Strategies & Considerations for Implementation of I/Q</u>

- Implementation of I/Q measures will need to occur in concert with the following:

- Communication strategies (risk communication messages, travel alerts, press releases and notification of interagency partners);
- Movement of essential personnel;
- Movement of materials (food, medical supplies, medical and non-medical waste); and
- Movement of individuals into and out of I/Q areas.

- There are three types of community I/Q as follows:
  - Home I/Q;
  - Designated facility I/Q; and
  - Work quarantine.

The type of I/Q used will depend on the specific circumstances and will vary with the individual being isolated/quarantined and the Level of the event (1,2,3,4).

4. Legal Considerations

a. Statutory Authority

The statutory authority for isolation and quarantine lies in New Jersey statutes, N.J.S.A. 26: 4-2 (Appendix H) which provides that in order to prevent the spread of disease, the NJDHSS and the local boards of health within their respective jurisdictions, and subject to the state sanitary code, shall have power to:

- declare what diseases are communicable;
- declare when any communicable disease has become epidemic;
- require the reporting of communicable diseases;
- maintain and enforce proper and sufficient quarantine, wherever deemed necessary;
- remove any person infected with a communicable disease to a suitable place, if in its judgment removal is necessary and can be accomplished without any undue risk to the person infected;
- disinfect any premises when deemed necessary; and
- remove to a proper place to be designated by it all articles within its jurisdiction, which, in its opinion, shall be infected with any matter likely to communicate disease and to destroy such articles, when in its opinion the safety of the public health requires it (Appendix H).

Thus, to prevent the spread of contagious or possibly contagious disease and to protect public health, the NJDHSS Commissioner may issue and enforce administrative orders and procedures for isolation or quarantine (Appendix I). In addition, all reasonable means shall be taken to prevent the transmission of infection among the isolated or quarantined individuals (Appendix H). These orders and procedures may include:

- isolation or quarantine of any person whose refusal of medical examination or testing results in uncertainty regarding whether he or she has been exposed to or is infected with a contagious or possibly contagious disease or otherwise poses a danger to public health;
- isolation or quarantine of persons who are unable or unwilling for reasons of health, religion, or conscience to undergo treatment; and
- establishment and maintainance of suitable places of isolation and quarantine.

In making decisions to isolate or quarantine, public health authorities must base their decisions upon the latest knowledge of epidemiology, virology, bacteriology, and public health and must utilize the least restrictive means necessary to effectively protect the public's health. The following standards shall apply for quarantine or isolation, when they need to be implemented:

- Persons shall be isolated or quarantined if it is determined by clear and convincing evidence that the person to be isolated or quarantined poses a significant risk of transmitting a disease to others with serious consequences.
- The Commissioner shall terminate isolation or quarantine of any person when that person no longer poses a significant risk of transmitting a disease to others with serious consequences.
- To the extent possible, the premises in which persons are isolated or quarantined shall be maintained in safe and hygienic manners, designed to minimize the likelihood of further transmission of infection or other harm to persons subject to isolation or quarantine.
- Adequate food, clothing, medication, means of communication and other necessities and competent medical care shall be provided.
- Isolated individuals must be confined separately from quarantined individuals.
- The health status of isolated and quarantined individuals must be monitored regularly to determine if their status changes. If a quarantined person subsequently becomes infected or is reasonably believed to have become infected with a contagious or possibly contagious disease, he or she must promptly be moved to isolation.
- A person subject to isolation or quarantine shall obey the Commissioner's rules and orders, shall not go beyond the isolation or quarantined premises, and shall not put himself or herself in contact with any person not subject to isolation or quarantine other than a physician or other health care provider, or person authorized to enter isolation or quarantine premises by the Commissioner.
- In certain cases a work quarantine may be issued. Work quarantine is defined as an exposure management tool for the public heath care delivery system and its workers who have had limited exposure to SARS. Workers are to travel alone to and from work, undergo temperature and general health monitoring upon arrival and departure from work, and remain at home when not at work.

In addressing the public health emergency requiring the isolation or quarantine of individuals, the NJDHSS shall make every effort to respect and accommodate the needs and rights of persons subject to isolation or quarantine, consistent with the overall

needs of public health and safety. NJDHSS, as necessary, will seek assistance and relief from the Superior Court in enforcing the Commissioner's isolation and quarantine orders.

b. N.J.S.A. 26:3-19. Local Health Personnel; Tenure; General Powers

N.J.S.A. 26: 3-19 provides that the local board of health may employ such personnel as it may deem necessary, to carry into effect the powers vested in it. Any duly appointed health officer shall, subject to the superior authority of the local board of health appointing him, be its general agent for the enforcement of its ordinances and the sanitary laws of the State. The health officer shall provide leadership in the field of public health in the community served by the local board of health as required under the "Public Health Practice Standards of Performance for Local Boards of Health in New Jersey," effective February 18, 2003. In addition to being the chief executive officer of the local board of health, the health officer is responsible for evaluating the health problems of the community served by the local board of health, planning appropriate activities to meet the health problems of the citizens thereof, developing necessary budget procedures to cover these activities and directing the staff of the local board of health to carry out these activities efficiently and economically.

c. Reporting

The NJDHSS Communicable Disease Service is responsible for epidemiologic activities related to reportable communicable disease as stipulated by N.J.A.C. 8:57 as well as public health issues and emergencies related to new emerging infectious diseases such as SARS. Under the New Jersey Administrative Code N.J.A.C. 8:57-1.3 (a) the following diseases shall be reported immediately to the health officer (HO) with the HO reporting immediately to the NJDHSS:

- Anthrax (Bacillus anthracis);
- Botulism (Clostridium botulinum);
- Brucellosis (Brucella spp.);
- Diphtheria (Corynebacterium diphtheriae);
- Haemophilus influenzae, invasive disease;
- Hantavirus;
- Hepatitis A, institutional settings;
- Measles;
- Meningococcal disease (Neisseria meningitidis);

- Pertussis (whooping cough, Bordetella pertussis);
- Plague (Yersinia pestis);
- Poliomyelitis;
- Rabies (human illness);
- Rubella;
- Smallpox;
- Tularemia (Francisella tularensis);
- Viral hemorrhagic fevers, including, but not limited to, Ebola, Lassa, and Marburg viruses;
- Foodborne intoxications, including, but not limited to, ciguatera, paralytic shellfish poisoning, scombroid, or mushroom poisoning; and
- Any outbreak or suspected outbreak, including, but not limited to, foodborne, waterborne or nosocomial disease or a suspected act of bioterrorism.

Since SARS is not endemic, one probable case would be considered an outbreak. As such, N.J.A.C. 8:57-1. 3 (a) would apply.

d. Confidentiality of Patient Information

Notwithstanding all provisions of law, access to medical information of persons who have participated in isolation or quarantine programs by the Commissioner during a public health emergency shall be limited to those persons having a legitimate need to acquire or use the information to: provide treatment to the individual who is the subject of the health information; conduct epidemiologic research; and investigate the causes of the transmission.

Medical information held by the Commissioner shall not be disclosed to others without individual written, specific informed consent, except for disclosures made directly to the individual; to appropriate federal agencies or authorities pursuant to federal law; to law enforcement agencies, including the state medical examiner, investigating the circumstances giving rise to the public health emergency; pursuant to a court order to avert a clear danger to an individual or the public health or to identify a deceased individual or determine the manner or cause of death.

e. Health Insurance Portability and Accountability Act of 1996, 42 U.S.C.A 1301 et seq. (HIPAA)

HIPAA encompasses new Federal rules to protect the privacy of individuals' health information that took effect April 14, 2003. HIPAA recognizes that various agencies and public officials will need protected health information to deal effectively with a bioterrorism threat or public health emergency. To facilitate the communications that are essential to a quick and effective response to such events, the Privacy Rule permits covered entities to disclose needed information to public officials in a variety of ways. Covered entities may disclose PHI, without the individual's authorization, to a public health authority acting as authorized by law in response to a bioterrorism threat or public health emergency (see 45 CFR 164.512(b), public health activities). The Privacy Rule also permits a covered entity to disclose PHI to public officials who are reasonably able to prevent or lessen a serious and imminent threat to public health or safety related to bioterrorism (see 45 CFR 164.512(j), to avert a serious threat to health or safety). In addition, disclosure of PHI, without the individual's authorization, is permitted where the circumstances of the emergency implicates law enforcement activities (see 45 CFR 164.512(f)); national security and intelligence activities (see 45 CFR 164.512(k)(2)); or judicial and administrative proceedings (see 45 CFR 164.512(e)).

f. Use of Private and Public Facilities

Under N.J.S.A. App. A:9-34, which sets out the Emergency Powers of the Governor, the Governor is authorized in an emergency, to utilize and employ all the available resources of the State Government and of each and every political subdivision of this State, whether of men, properties or instrumentalities, and to commandeer and utilize any personal services and any privately owned property necessary to avoid or protect against any emergency subject to the future payment of the reasonable value of such services and privately owned property as hereinafter in this act provided.

5. Team Approach

SARS containment planning and response is a complex multi-discipline activity dependent upon the coordination of all available public health and health care assets in the affected community. The potential for SARS containment measures to impact the movement of large numbers of individuals in a community or larger geographic area necessitates that planning and response efforts cross jurisdictions and geopolitical boundaries and incorporate multi-jurisdictional resources.

Identification and engagement of key partners and stakeholders will be needed to accomplish these goals. This should be done through the formation of working teams at the state and local levels. Planning initiatives should take into account the need to form both fixed and mobile (field) response teams with pre-designated and trained members.

State teams will need to be developed that plan and oversee the implementation and coordinate the operations of statewide I/Q policies. Local teams will need to be developed that plan, organize and manage the implementation and operations of statewide I/Q policies at the local level; monitor and support individuals being isolated or quarantined medically, socially, and for activities of daily living; and also provide logistical and operational support for community-based I/Q. State and local teams will complement each other in terms of responsibilities and membership and act in coordination with each other to provide an integrated statewide response. All teams should operate based on the State policies outlined in this document. State policies will be developed in accordance with CDC Guidance and with input from state and local partners. Appendix K summarizes the various teams and their relationships.

a. State Teams

- **Regional Planning/Operations Teams (RPOT)**

  The RPOT will be responsible to assure that containment and mitigation policies and systems (I/Q) are planned, developed and coordinated statewide. This will require appropriate representation from and coordination with state, regional and local partners.

  In addition, the RPOT will be responsible for coordinating logistical and operational support for community-based I/Q operations statewide across jurisdictional boundaries. Support will be needed to coordinate statewide assets available for security, emergency and non-emergency transportation, food, laundry, disposal of regular and medical waste, medical supplies, cleaning and disinfection of environmental surfaces, PPE, staffing assignments and credentialing, housekeeping, administration, environmental health and logistics. The RPOT will operate in both fixed and mobile venues and will operate in conjunction with the Local Operations Monitoring Team (See below). Examples of other responsibilities that will need to be coordinated prior to an event include: coordination of the development of **Mutual Aid Agreements (MAA)** between health care and public health care systems, staffing, training and equipment. During an event, the appropriate members of the Team will operate at the State EOC.

  RPOT membership will include NJDHSS staff from the Office of Emergency Response, Public Employees Occupational Safety and Health Program (PEOSH), five Regional Hospital Planners, medical (physicians, nurses, etc.) support, Emergency Medical Services, financial support, environmental support, IT support, laboratory support and training personnel. Membership will also include appropriate local representatives.

- State Consultation & Technical Oversight

  The NJDHSS will be responsible for providing consultation and technical support as needed. Types of technical support provided will include case/contact management, logistics, personal protective equipment, etc., and will parallel the types of services that are needed at the local level. This document refers to two specific consultation and technical support teams but less formal technical support mechanisms may be more appropriate dependent upon the individual circumstances.

- **State Case/Contact Management Coordination Team (SCCMCT)**

  The SCCMCT will be responsible for providing technical support for the LCCMT specified below.

  SCCMCT membership will be provided by NJDHSS staff and parallel the membership on the LCCMT.

b. Local Teams

- **LINCS Agency Planning Group (LAPG)**

  The LAPG will be the fixed team that is responsible for planning, organizing and managing the implementation and operations of countywide I/Q policies. This will include the development and implementation of all plans, policies and procedures related to community I/Q. All activities should be coordinated with state policies and procedures and be part of the comprehensive preparedness/planning activities required on local and statewide levels. During a large-scale event (Levels 3/4), the key members of this group will function as the County lead for SARS I/Q emergency response. This effort should be integrated into the County Public Health Emergency Preparedness Planning Process.

  LAPG membership should include the LINCS Agency Core Infrastructure Unit (NJDHSS Planner/Coordinator, Epidemiologist, Information Technologist, Health Educator/Risk Communicator, LINCS Coordinator, Partnership Coordinator and Public Health Nurse) under the direction of the LINCS Health Officer; health officers and other key staff from LHDs in the jurisdiction; health care providers; and representatives from law enforcement, Chamber of Commerce, local/county Office of Emergency Management, Emergency Medical Services, public transportation agencies, and volunteer disaster agencies such as the ARC and the Salvation Army.

- Local Case/Contact Management Teams (LCCMT)

  The LCCMT will be responsible for developing and providing the systems needed for medical, social, and psychological monitoring and support for individuals being isolated or quarantined. The LCCMT will also identify, train and assign staff that will provide case-management services for all individuals who are isolated or quarantined, and will obtain and maintain all records related to case-management. Referral, admission and discharge procedures that link triage systems and contact tracing activities will be used. LCCMT will be responsible for the medical monitoring of all local staff who have contact with a potential SARS case. The LCCMT will also be responsible for relaying/transmitting information to the NJDHSS.

  LCCMT membership should represent the expertise needed to develop the local systems needed to provide medical, social, psychological support and monitoring for isolated or quarantined individuals. Members should represent staff from LINCS agencies and local health departments as follows: public health nursing; case management; risk communication; information technology (IT); staff needed for record retention for medical surveillance and treatment; and mental health. Volunteer disaster organizations such as **Volunteer Organizations Active in Disaster (VOAD)**, ARC and/or the Salvation Army should be considered to support these activities. Mobile or field teams will need to be available.

- **Local Operations Monitoring Teams (LOMT)**

  The LOMT will be responsible for providing logistical and operational support for community-based I/Q operations in their jurisdiction and other jurisdictions as required and specified in the MAA. Support will be needed for security, emergency and non-emergency transportation, food, laundry, disposal of regular and medical waste, medical supplies, cleaning and disinfection of environmental surfaces, PPE, staffing assignments and credentialing, housekeeping, administration, environmental health and logistics.

  LOMT membership should include representatives from: security, law enforcement, Chambers of Commerce, VOAD, OEM, LINCS agencies and LHD staff. Consultation with the NJDHSS PEOSH staff may be needed. Members of the team should be pre-designated and trained prior to the event.

6. Protocols for I/Q

The following protocols are based on the section entitled, "Management of Individuals Who Had Close Contact with a SARS Case," located in Appendix G of this plan.

a. Quarantine: Asymptomatic Contacts

- Persons who may have been exposed to SARS should be vigilant for fever (i.e. measure temperature twice daily) and respiratory symptoms over the 10 days following last exposure. During this time, in the absence of both fever and respiratory symptoms, persons who may have been exposed to SARS patients need not limit their activities outside the home and should not be excluded from work, school, out-of-home child care, church or other public areas unless it is determined that quarantine is necessary in a Level 3/4 event.

- Exposed persons should notify their health-care provider immediately if fever OR respiratory symptoms develop. **In advance of clinical evaluation, health-care providers should be informed that the individual may have been exposed to SARS so arrangements can be made, as necessary, to prevent transmission to others in the health care setting.**

b. Home-Based Isolation: Symptomatic Individuals

- SARS Cases - Symptomatic

  Information available from CDC related to the spread of SARS suggests that only symptomatic patients transmit the virus to others. Any plans and protocols developed for home-based I/Q should include the following infection control measures. These recommendations are based on the experience from the Spring 2003 SARS outbreak and may be revised as more information becomes available.

  - SARS patients should limit interactions outside the home and should not go to work, school, out-of-home child care, or other public areas until 10 days after the resolution of fever, provided respiratory symptoms are absent or improving. During this time, infection control precautions should be used, as described below, to minimize the potential for transmission.

  - All members of a household with a SARS patient should carefully follow recommendations for hand hygiene (e.g., frequent hand washing or use of alcohol-based hand rubs), particularly after contact with body fluids (e.g., respiratory secretions, urine, or feces). See the CDC guideline for "Hand Hygiene in Healthcare Settings" at http://www.cdc.gov/handhygiene/ for more details on hand hygiene.

  - Use of disposable gloves should be considered for any direct contact with body fluids of a SARS patient. ***However, gloves are not intended to replace proper hand hygiene.*** Immediately after activities involving contact with body fluids, gloves should be

removed and discarded and hands should be cleaned. Gloves must never be washed or reused and should be disposed as normal household trash.

- Each patient with SARS should be advised to cover his or her mouth and nose with a facial tissue when coughing or sneezing. If possible, a SARS patient should wear a surgical mask during close contact with uninfected persons to prevent spread of infection. When a SARS patient is unable to wear a surgical mask, household members should wear surgical masks when in close contact with the patient.

- Sharing of eating utensils, towels, and bedding between SARS patients and others should be avoided, although such items can be used by others after routine cleaning (e.g., washing with soap and hot water). Environmental surfaces soiled by body fluids should be cleaned with a household disinfectant according to manufacturer's instructions; gloves should be worn during this activity.

- Household waste soiled with body fluids of SARS patients, including facial tissues and surgical masks, may be discarded as normal waste.

- Household members and other close contacts of SARS patients should be monitored daily by the LCCMT in conjunction with LINCS agencies and LHDs for illness.

- Household members or other close contacts of SARS patients should be vigilant for fever (i.e., measure temperature twice daily) and respiratory symptoms and monitored by the LCCMT. If symptoms develop, they should immediately seek health care evaluation. **In advance of evaluation, health care providers should be informed that the individual is a close contact of a SARS patient so arrangements can be made, as necessary, to prevent transmission to others in the health care setting.** Household members or other close contacts with symptoms of SARS should follow the same precautions recommended for SARS patients.

- In the absence of fever or respiratory symptoms, household members or other close contacts of SARS patients need not limit their activities outside the home. Asymptomatic contacts generally do NOT need to be quarantined and do NOT need to limit their activities; however if surveillance indices demonstrate increased SARS activity in the community, quarantine precautions might be implemented under NJDHSS administrative orders.

- Initiation of Home-Based Isolation

  Upon notification of the need for home-based I/Q, the LINCS agency in conjunction with the LHD through the LCCMT and/or LOMT for the jurisdiction will do the following:

  - Issue a Notice of Isolation Agreement (Appendix L) to the affected individual and/or parent/guardian.
    - The patient and household members should be educated concerning items in the bullets under "SARS Cases-Symptomatic," above.
    - The Notice of Isolation Agreement should be discussed with the individual and signed and dated to attest to the terms of the agreement.

  Involuntary home-based isolation can be used if determined to be feasible. All requirements for voluntary home-based isolation must be followed.

  - Develop LCCMTs to manage and support the above requirements and, in addition:
    - Establish an intake protocol that obtains and documents personal and emergency contact information (see Appendix M);
    - Establish a medical evaluation protocol (medical monitoring, referral, discharge or death); (see CDC's Supplement B for "SARS Case Report Form");
    - Establish a surveillance protocol for home-based monitoring by using a SARS Surveillance Report Form (see Attachment M which lists anticipated data collection elements to be included in CDC's form which is being development);
    - Develop a case-management protocol for individuals to include: daily contacts (via telephone, home visits), health monitoring, and appropriate personal support services, utilizing a form to be developed by the CDC;
    - Contact the LOMT so that arrangements for personal support services, such as medical supplies and care, food, childcare, laundry, housekeeping, mental health, disability, and unemployment can be made. County Board of Social Services may be a viable resource in assisting in some of these personal support services; and
    - Evaluate case/contact for future referral and/or termination of I/Q.

  - Provide appropriate PPE.

  - Establish a case management telephone hotline to address concerns and answer any questions.
    - A state-based hotline will be available for clinicians and local health departments to address case management questions (e.g., clinical management, infection control guidance, laboratory specimen collection) that require NJDHSS expertise.
    - A local-based hotline for quarantined contacts or isolated cases should be available to track these individuals (e.g., contacts can call in to this

local hotline to indicate whether they were afebrile or asymptomatic). These telephones can also be used for staff to call contacts and cases for monitoring purposes.

- Arrange for appropriate transportation to ensure worker protection and isolation integrity.

- Provide periodic information updates to the NJDHSS' SARS data management system for case surveillance and contact management.

- Evaluate and address **special population** needs (elderly, children, cultural/religious, minorities, handicap, etc.).

The CDC will provide home-based isolation assessment tools and ventilation guidance.

c. Community Isolation Centers

- General

Each LAPG will need to develop a plan that will be capable of isolating 300 individuals. This will provide for a statewide capacity of housing about 6,600 individuals.

Community isolation centers will be responsible for **cohorting** and monitoring mildly symptomatic individuals who are not appropriate for hospital admissions or home isolation due to logistical problems, non compliance, homelessness, transient status, travelers or societal non acceptance, etc. The site selection criteria should be made in conjunction with County OEM, law enforcement agencies, fire/construction subcode officials, legal professionals, environmental health specialists, infection control professionals, and public health nurses.

- Site Selection Criteria:

The following procedures should be used as the minimal criteria for site selection:

- Segregated Heating Ventilating Air Conditioning (HVAC) air and heating systems or existing systems capable of being segregated from existing structures;
- Adequate water, bathroom and shower facilities;
- Capacity for providing basic needs, such as:
  - food service capabilities;
  - medical evaluation, care and supplies;
  - windows, TV, phones;
- Laundry facilities or a contract to provide laundry facilities;

- Cleanable rooms and facilities with a minimum of non porous surfaces (e.g., carpets);
- Refrigeration;
- Site layout compatible with ARC Shelter Operations (under development);
- Considerations for separate sleeping areas for families with young children, elderly, single men and women (sleeping quarters require a minimum of 40 square feet per person);
- Able to house at least 100 individuals to provide efficient operations;
- Internet capability;
- Adequate parking;
- Separate toilet and feeding facilities for staff; and
- Development of a written agreement with the facility management (under development).

- Examples of Suitable Facilities:
  - community centers;
  - existing shelters identified in the County/Local Emergency Operations Plan or through the ARC or Salvation Army;
  - youth camps;
  - hotel/motels;
  - religious facilities;
  - unused hospital wings or areas;
  - schools;
  - cruise ships;
  - military bases; and
  - armories.

- Operational Considerations:

  - Develop staffing patterns
    - Facility Manager - This person will be responsible for the overall operations of the facility including oversight of all support services. It is recommended that at least three individuals be trained in shelter management through the ARC.
    - Physician oversight should be available by phone or on-site as needed.
    - Nursing staff should be available on-site 24/7 for medical monitoring, evaluation and non emergency care at the level appropriate for the number of residents.
    - Administrative support staff to maintain resident records. These records should be able to track the resident, and document medical monitoring and care.
    - Food service staff.
    - Housekeeping staff.
    - Infectious Disease oversight available or on-site consultation as needed.
    - On-site mental health support for residents and staff.
    - Social services support available or on-site as needed.

- Institute an administrative and record keeping system that links with the overall disease control efforts at the state and county level.
  - A case folder that shall include at a minimum the following records:

    - Resident records
      - Intake form (personal and emergency contact information);
      - Medical evaluation form (medical monitoring, referral, discharge or death); and
      - Daily surveillance form (tracing/tracking case-patients and contacts).
    - Staff records
      - Staffing assignment, schedule and sign-in and sign-out forms;
      - Staff credentialing; and
      - Staff medical monitoring.
  - Use of a referral, admission and discharge procedure that links triage systems and contact tracing activities.

- Identify emergency transportation (EMS) from the center to a hospital.

- Identify non-emergency transportation systems related to initial transport to the center, health care visits and discharge.

- Identify food service contracts or on-site food preparation needs.
  - Food will be prepared off- site or on-site.
  - Single service utensils, cups, plates should be used if commercial dishwasher not available.
  - Food service shall be compliant with Chapter XII, Retail Foods, N.J.A.C. 8:24-1 et seq.

- Laundry services need to be provided in accordance with CDC Guidance.

d. Special Considerations

- Individuals not meeting the SARS-CoV case definition for probable or confirmed cases (see Appendix G) but experiencing SARS-like symptoms will be classified as "SARS Reports Under Investigation." Individuals in this category may be quarantined for a period up to 72 hours with home-based quarantine as the method of preference.

- Community-based I/Q measures for Special Populations should be home-based with daily visitation by the LCCMT to assure needed services are provided.

- Individuals in need of congregate housing shall be physically separated from probable SARS cases.

- In a Level 3/4 event, when there is a need for quarantine for a large number of individuals across a wide geographic area, it may be more

feasible to use concepts, such as Snow Days (statewide or geographic location, days off from work), suspension of public gatherings, restrictions of travel (air, rail, water, motor, pedestrian), cancellation of events, curfews, geographic or population-based movement restrictions, closing of public buildings and places, voluntary or mandatory closing of businesses and institutions, temperature monitoring in public buildings and places, or recommended or mandatory mask use.

- In a Level 3/4 event, work quarantine may be instituted for health care workers or other essential personnel who have been exposed to SARS patients and who may need to continue working (using appropriate infection control precautions). In work quarantine, workers are quarantined either at home or in a designated facility during off-duty hours.

e. Non-compliant individuals

- An individual can be determined to be non-compliant immediately upon notification of the need for their I/Q or subsequent to notification. Deliberate non-compliance by an individual warrants the need to issue an Administrative Order directing the isolation or quarantine of the individual by the Commissioner in conjunction with the local health officer. (See # 4. above, IV., Legal Considerations.) Mechanisms must be in place that allow the identification of these individuals and provide for the ability to issue them the Order.

- An individual can also be non-compliant due to a special circumstance that makes them unable to comply. These individuals should be provided support services needed to comply. If support services do not result in compliance, the individual must be placed in an appropriate Community I/Q Center to ensure compliance.

7. Personal Protective Equipment (PPE)

The transmission of SARS appears to occur predominantly by direct contact with infectious material including dispersal of large respiratory droplets. However, it is also possible that SARS can be spread through the airborne route. For public health care workers, CDC recommends, at a minimum, the use of N95 respirators consistent with airborne diseases such as TB. For specific details regarding the use of these devices, refer to "Interim Domestic Guidance on the Use of Respirators to Prevent Transmission of SARS" at http://www.cdc.gov/ncidod/sars/respirators.htm and "Understanding Respiratory Protection Against SARS" at http://www.cdc.gov/niosh/npptl/respirators/respsars.html.

General worker protection guidelines include standard precautions such as:

- hand hygiene; and
- contact precautions - use of gown, gloves and eye protection for contact with the patient and their environment.

As with other infectious illnesses, one of the most important and appropriate preventive practices is careful and frequent hand hygiene. Cleaning hands often using either soap and water or waterless alcohol-based hand sanitizers removes potentially infectious materials from skin and helps prevent disease transmission.

8. Cleaning & Disinfection of Environmental Surfaces

Additional Home I/Q Reference Documents can be found in CDC's, "V. Infection Control for Care of SARS Patients at Home" available at http://www.cdc.gov/ncidod/sars/guidance/I/index.htm.

9. Hospital /Alternate Facilities

General Acute Care Hospitals (hospital) should review their Emergency Management Plans to ensure that they include an isolation component. This component should include an assessment of the number of respiratory isolation beds, rooms that can be converted to meet respiratory isolation standards and the ability to isolate floors or wings of hospital.

Each hospital in the State of New Jersey will have the capacity to handle at least two patients with severe symptoms of SARS. Every hospital will have a plan for initially managing a larger number of such patients. The number of patients will vary dependent upon the number of medical/surgical beds that the hospital maintains as follows:

- < 100 beds - 5 patients
- 100-150 beds - 10 patients
- 150-200 beds - 15 patients
- 200-250 beds - 20 patients
- 250-300 beds - 25 patients
- 300-350 beds - 30 patients
- > 350 beds - 35 patients

Every hospital must participate in a planning process that will address the logistics of managing a catastrophic outbreak (500 or more) of patients with SARS in each of NJDHSS' five regions. It is expected that hospitals will need to plan to amass the necessary health care assets to care for 500 patients within each of the NJDHSS 5 planning regions. Hospitals should work collaboratively to plan to provide management, equipment, supplies, staffing and support services. This process may include planning for an alternate facility.

Planning for an alternate facility should be an integral component of the County/Regional SARS Response Plan and integrated into County and State Emergency Operation Plans. It is recommended that the RPOTs and the LAPGs for each of the NJDHSS' five regions convene an Alternate Facility Planning Team. This Team should include representatives from each hospital in the region, the OEMs in the region, the LINCS Health Officers, the five regional planners, the five NJDHSS hospital planners, and representatives from the NJDHSS' Healthcare Quality and Oversight Branch.

Issues that need to be addressed are:

- Expansion of current hospital isolation bed capacity;
- Designation of hospital(s) in whole or part as isolation facilities;
- Establishment of off-site facility linked to the hospital that can divert non-critical and worried well patients away from the Emergency Department.
- Identification and/or development of alternate health care isolation facilities; and
- Development of staffing policies that address an extended event with provisions for support services for staff (mental health, family issues, etc.) and use of external staff.

10. Summary

In summary, in the event of a large scale SARS outbreak (Level 3/4), procedures will need to be in place that will allow the immediate implementation of the isolation and quarantine protocols outlined above. The ability to implement these protocols in a timely manner will be critical to the state's ability to contain the outbreak.

E. International Travel

CDC's "Public Health Guidance for Community-Level Preparedness and Response to SARS," Supplement E: "Managing International Travel-Related Transmission Risk" (http://www.cdc.gov/ncidod/sars/guidance/) provides a description of considerations for preventing the importation and exportation of SARS, and for ensuring the appropriate evaluation and management of SARS cases and potentially exposed passengers and crew members on airplanes and ships. The appendices include:

- Travel-Related SARS Response Matrices;
- Interim Guidance for Institutions or Organizations Hosting Persons Arriving from Areas with Severe Acute Respiratory Syndrome (SARS);
- Interim Guidelines for Businesses and Other Organizations with Employees Returning to the United States from Areas with SARS;
- Guidelines for International Adoptees and Their Families;
- Health Alert Notice for International Travelers Arriving in the United States from Areas with SARS; and
- Interim Guidelines and Recommendations: Prevention, Identification and Management of Suspect & Probable Cases of SARS on Cruise Ships.

CDC Division of Global Migration and Quarantine

Foreign quarantine regulations define the procedures to be followed and the diseases for which there is a responsibility to prevent the introduction, transmission, and spread of communicable disease from foreign countries into the United States. These responsibilities are delegated to the CDC's National Center for Infectious Diseases, Division of Global Migration and Quarantine. Quarantine stations are located at eight major international airports; each quarantine station has responsibility for enforcing foreign quarantine regulations at all ports of entry within its assigned area of jurisdiction. The Quarantine Station at JFK International

Airport has responsibility for all ports, seaports, and international airports in New Jersey. Since quarantine personnel are not located at every port of entry, the Quarantine Stations train Immigration, Customs and Agriculture Inspectors to watch for ill persons and imported items having public health significance. Quarantine inspectors respond to illness in arriving passengers and notify the Division of Global Migration and Quarantine to ensure that the appropriate medical and/or procedural action is taken. To ensure proper inspection, the Division trains each class of new federal inspectors and periodically provides continuing education to experienced inspectors.

F. Laboratory Services: CDC, NJDHSS, & Hospital/Commercial Laboratories

CDC's "Public Health Guidance for Community-Level Preparedness and Response to SARS," Supplement F: "Laboratory Diagnosis" (http://www.cdc.gov/ncidod/sars/guidance/), provides a description of considerations for providing high-quality SARS diagnostics, the safe and appropriate use of diagnostics, and the proper interpretation of results. The appendices include:

- Proficiency Testing for Public Health Laboratories Performing SARS-CoV EIA and RT-PCT Diagnostics;
- SARS Specimen Testing Guidelines – RT-PCR and Serology;
- Guidelines for Collection of Specimens from Potential Cases of SARS;
- Laboratory Biosafety Guidelines for Handling and Processing Specimens Associated with SARS; and
- Fact Sheet for Clinicians: Interpreting SARS Test Results from CDC and Other Public Health Laboratories.

The guidelines below describe laboratory services available at the CDC, NJDHSS PHEL and hospital/commercial laboratories.

1. Spring 2003 Laboratory Services

   a. CDC

      In April 2003, CDC sequenced the genome for the coronavirus believed to be responsible for SARS; the sequence data confirmed that the SARS-CoV is a previously unrecognized coronavirus. All of the sequence, except for the leader sequence, was derived directly from viral RNA. The genome of the SARS-CoV is 29,727 nucleotides in length and the genome organization is similar to that of other coronaviruses. Open reading frames corresponding to the predicted polymerase protein (polymerase 1a, 1b), spike protein (S), small membrane protein (E), membrane protein (M) and nucleocapsid protein (N) have been identified. Sequence information provided by collaborators at National Microbiology Laboratory, Canada, University of California at San Francisco, Erasmus University, Rotterdam and Bernhard-Nocht Institute, Hamburg facilitated this sequencing effort (available at http://www.cdc.gov/ncidod/sars/sequence.htm).

Subsequently, CDC provided SARS-CoV testing (serum antibody tests, including both enzyme immunoassay and indirect fluorescent-antibody formats and reverse transcription-polymerase chain reaction testing on serum, stool, and nasal secretions) on clinical specimens from U.S. suspect and probable cases. The NJDHSS, in collaboration with LHDs and hospitals, collected clinical specimens on SARS cases, per CDC protocols (available at http://www.cdc.gov/ncidod/sars/specimen_collection_sars2.htm), and sent them to CDC for SARS-CoV antibody testing.

b. PHEL

SARS-CoV tests were not available at PHEL during the 2003 outbreak. However, PHEL facilitated packaging and transport of clinical specimens for shipment and testing at CDC.

c. Hospital/Commercial Laboratories

SARS-CoV tests were not available at hospital and commercial laboratories during the 2003 outbreak. However, hospital and commercial laboratories provided routine testing services to rule out other illnesses that might present similarly to SARS infection (e.g., influenza rapid antigen tests, viral and bacterial cultures, respiratory syncytial virus tests).

2. Planned Laboratory Activities & Currently Available Services

a. CDC

CDC has established guidelines for laboratory diagnosis of SARS-CoV infection (as of July 3, 2003; available in Appendix F8 at http://www.cdc.gov/ncidod/sars/guidance/F/index.htm):

- Detection of serum antibody to SARS-CoV by a validated test (e.g., enzyme-linked immunosorbent assay [ELISA]), or
- Isolation in cell culture of SARS-CoV from a clinical specimen, and PCR confirmation using a test validated by CDC, or
- Detection of SARS-CoV RNA by a reverse transcription-polymerase chain reaction (RT-PCR) test validated by CDC from
  - One specimen tested on two occasions using the original clinical specimen on each occasion, or
  - Two clinical specimens from different sources (e.g., nasopharyngeal and stool), or

- Two clinical specimens collected from the same source on 2 different days (e.g., 2 nasopharyngeal aspirates).

Real-Time PCR testing protocols may be expanded to include stool specimens, which have been shown to be useful for detection of viral RNA because the virus may persist in the stool longer than in respiratory secretions; Real-Time PCR testing of blood may be useful for detection of viral RNA in patients with early symptoms.

CDC has made reagents for SARS-CoV antibody and nucleic acid testing available to state public health laboratories. To meet U.S. Food and Drug Administration regulations for use of non-licensed tests in laboratories outside of CDC, the Institutional Review Board of CDC has approved consenting documents and additional informational material for use in conjunction with the collection and testing of specimens in state public health laboratories. Clinicians are encouraged to obtain, if possible, informed consent prior to collecting such specimens, and to contact the NJDHSS CDS or PHEL for additional information on submitting specimens.

b. NJDHSS PHEL

- PHEL performed an initial assessment of statewide laboratory capacity of potential Level A (sentinel) laboratories (including laboratories at hospitals, and academic centers) regarding reagent/media availability, scope of testing, knowledge and compliance with safety/packaging/transport regulations, and knowledge of departmental communication protocols for reporting suspected BT agents. It identified 68 Level A laboratories performing comprehensive clinical microbiology. They are compiled in both statewide and regional directories with BT contact's phone, fax and email address.

- Several training sessions have been held for Level A laboratory staff who have been provided with a comprehensive procedure manual which includes BT laboratory safety guidelines, sample handling and chain of custody protocols, Level A testing procedures, and sample reporting algorithms. Future training will include "Packaging and Transport of Diagnostic Specimens and Infectious Substances" to ensure compliance with current US Department of Transportation, US Postal Service, and International Air Transport Association regulations and/or CDC guidelines. Staff identified by LINCS agencies will be offered training related to transport of specimens. Specific shipping and packaging assessment tools will be developed by NJDHSS to appraise workplace effectiveness of NJDHSS training. In addition, on-site visits will be held to determine ongoing Level A laboratory BT capacity and compliance with good practice standards.

- PHEL has convened a New Jersey Laboratory Response Network (LRN) Work Group to discuss and detail stakeholder roles and responsibilities. This work group will also develop an operational plan to provide agreed upon guidance, support and communication to achieve effective statewide integration in the event of a major public health threat.

- PHEL routinely provides laboratories with the most current CDC lab guidelines for biosafety recommendations for specimen collection, laboratory processing for infectious disease testing in the microbiology laboratory, as well as precautions for specimens from suspect patients when performing routine clinical testing on blood.

- The PHEL and CDC have begun their collaboration regarding SARS testing which is now available at both PHEL and CDC. In addition, the PHEL will establish Standard Operating Procedures for rapid confirmation of SARS reports under investigation and protocols for rapid notification of results to NJDHSS CDS staff who will subsequently follow-up with LHDs and LINCS agencies. In the past, the PHEL has used both the LINCS system and the division's Laboratory Outreach Program listserv to provide laboratory-related information to licensed clinical laboratories.

- Rapid assays will be developed in accordance with CDC guidance for testing of viral and bacteriological pathogens that may cause illnesses resembling SARS.

- A SARS-CoV real-time PCR and an ELISA procedure for testing clinical specimens is currently available at the PHEL.

- Procedures are in place for the shipment of samples to CDC for SARS testing in accordance with CDC, U.S. Department of Transportation, and International Air Transport Association regulations or guidelines.

- All suspected SARS specimens submitted to PHEL for testing using CDC validated PCR screening procedures, and which test positive, will be sent to CDC for confirmatory testing.

- No current protocol for environmental testing exists.

c. Hospital & Commercial Laboratories

- Hospital and commercial laboratories provide testing for organisms that might cause illnesses that resemble SARS, and should be used first to rule-out SARS.

- Initial diagnostic testing for suspected SARS patients should include chest radiograph, pulse oximetry, blood cultures, sputum Gram's stain and culture, and testing for viral respiratory pathogens, notably influenza A and B and respiratory syncytial virus.

- Specimens for Legionella urinary antigen testing should also be considered.

- Clinicians should save any available clinical specimens (respiratory, blood, and serum) for additional testing until a specific diagnosis is made.

- Acute and convalescent (greater than 28 days after onset of symptoms) serum samples should be collected from each patient who meets the SARS case

definition. Paired sera and other clinical specimens can be forwarded through state and LHDs for testing at NJPHEL and/or CDC.

- It is likely that Real-Time PCR tests for the detection of SARS-CoV will be developed and utilized in commercial laboratories, and the results of these tests may have a significant impact on decisions to use public health control measures, such as isolation and quarantine. **Commercial laboratory testing for SARS- CoV, as of the release of this document, has not been validated; results of commercial laboratory testing will still require PHEL- or CDC-confirmatory testing.**

G. Communication

CDC's "Public Health Guidance for Community-Level Preparedness and Response to SARS," Supplement G: "Communication" (http://www.cdc.gov/ncidod/sars/guidance/) provides a description of considerations for instilling public confidence, maintaining order, providing accurate information, addressing rumors and preventing stigmatization of affected groups. The appendices include:

- Fact Sheet: Joint Information Center;
- Media Relations;
- Community Relations/Outreach; and
- CDC Field Communications Liaisons.

The goals of the NJDHSS communications plan (Appendix N) are to:

- Instill and maintain confidence in New Jersey's PHC system and its ability to respond to and manage the re-appearance of SARS.
- Contribute to the maintenance of order, minimization of public panic and fear and facilitation of public protection through the use of accurate and rapid information before, during and after a SARS outbreak.
- Develop and disseminate timely and accurate information to the general public, with much preparation of materials done in advance of a SARS outbreak.

1. Preparing Public Health Care Workers (PHCWs)

   - For epidemiologic activities, it is recommended that there be some cross-training of hospital and LHD staff. Hospitals and other health care providers also may need clarification of specific roles to be performed by hospitals and LHDs during investigative activities (e.g., providing contact information and tracing). For example, outlining each program's responsibilities with respect to collection, sharing, and dissemination of data on SARS patients before an outbreak could facilitate rapid exchange of information during an outbreak.

- NJDHSS staff will continue to collaborate with New Jersey's health professional schools, Rutgers University, and public health and medical professional associations in the planning and presentation of educational sessions about SARS preparedness and response.

- The NJDHSS CDS staff will train state and local PHCWs to respond in the event of a SARS outbreak. In conjunction with the NJDHSS Exercise Unit, they will also develop and implement tabletop and functional exercises to assess participant response and readiness. In addition, CDS staff will also be determining ways to apply the incident command system (ICS) to SARS.

- The LINCS agencies, in conjunction with the NJDHSS, will assess the knowledge, attitudes and beliefs of key regional stakeholders with regards to public health surveillance, investigation, response and control. Staff will then attend local/regional meetings to educate the key stakeholders about public health surveillance, investigation, response and control; and implement training and education sessions to educate key individuals about public health surveillance, investigation, response and control.

- Since ill people often seek advice from their pharmacists first, pharmacists will be offered information on SARS and infection control. Pharmacists need to protect their own health as well as the health of immunocompromised individuals who may be waiting for their prescriptions to be filled.

- In the fall of 2003, risk communication training was provided to public health professionals by Vincent T. Covello, Ph.D., Director of the Center for Risk Communication in New York.

- UMDNJ/Rutgers will provide training in risk communication to NJDHSS staff, LINCS staff and PHC partners. Trained NJDHSS staff will provide CDC Emergency Risk Communication trainings (including Media Relations Training) to PHC partners.

2. <u>Mechanisms and Logistics for Communicating with PHCWs</u>

- The CDC has primary responsibility for communicating public health issues to other federal agencies, state agencies and the public. Its partner, the Council of State and Territorial Epidemiologists, also participates in disseminating information to all State Epidemiologists. Currently, routine communications are provided through press releases, publication in the Morbidity and Mortality Monthly Report (MMWR), and on the CDC web site. In emergency situations, CDC has communicated with states via conference calls, fax, and e-mail. Also, the CDC has developed a secure web site and a secure e-mail/notification system for state public health officials, called "Epi-X".

- The NJDHSS Office of Communications maintains a database of New Jersey hospital public information officers. NJDHSS also has a partnership with the **New Jersey Hospital Association (NJHA)** for the timely dissemination of emergency preparedness information to all general acute care hospitals, regardless of their membership in NJHA. NJDHSS will develop a system to ensure that the contact files for medical and public health organizations maintained by the department are coordinated and current.

- The NJDHSS' website will be emphasized as a coordinating resource for timely communication of vital information to health care providers, emergency responders and public health professionals as well as for status updates of benefit to the general public.

- The NJDHSS has the capacity to fax emergency messages to hospitals, nursing homes, LHDs, and others. All 113 LHDs can be contacted by fax, phone, cellular phone, e-mail and have access to the Internet. In addition, all 85 general acute care hospitals have 800 MHz radios; and these radios are also planned for the 22 LINCS agencies. However, the primary avenue for communicating with the PHCWs will be via LINCS. In 2001, LINCS, via the LINCS Health Alert Network, played a critical role in the timely dissemination of anthrax information to over 20,000 individuals and organizations statewide, including LHDs, health care practitioners, and emergency responders. Each of the 22 LINCS agencies, acting as communication "hubs", were critical in the rapid notification, dissemination of information, and response to anthrax through their countywide **"Community Health Alert and Information Network" (CHAIN)**. This CHAIN consists of public health and community representatives statewide, including LHDs, health care organizations, law enforcement organizations, local government officials and other public health partners. Through the LINCS agencies, NJDHSS has the ability to reach local boards of health, HCFs/providers, clinical labs, pharmaceutical companies, emergency responders, health care providers educational institutions, and others. This network ensures email and/or fax communication between NJDHSS and approximately 30,000 individuals.

- Key public health partners and health care providers have secure and encrypted web portal access to the HAN applications from any computer**.** During the 2001 anthrax attack, LINCS agencies provided support to the CDC HAN. CDC information was reviewed by NJDHSS management prior to distribution to ensure consistency with state policies and procedures, and adapted where needed. It is anticipated that a similar process will be followed for communicating SARS information. LINCS agencies and all LHDs are expected to keep their CHAINs updated and to develop a system of redundancy for communication within their jurisdictions. In addition, all LINCS agencies' contact databases will be backed up within NJDHSS to ensure a redundant means of contact with these groups. The list of agencies and organizations is also being expanded.

- Sophisticated software ("The Communicator," Dialogic Communications Corporation) has been purchased, which is designed to function as a reverse 911 system for notifications. This "communicator system" interface allows for automated notification to LHDs, hospitals, and first responders through all available modalities such as fax, telephone, pagers, and email.

- All communication systems between the NJDHSS and partners are tested monthly. LINCS agencies are to perform monthly tests of their communications with their individual CHAINs. Deficiencies are given priority for correction. These systems include phone (landlines and wireless), fax, paging, the HAN/LINCS, and "The Communicator."

3. Preparing the Public

As with PCHWs, the public also would benefit from a basic understanding of SARS prior to any suspect cases appearing. This will help to lessen the panic associated with the unknown, in this instance, a new pathogen whose behavior is not yet completely defined. It will also prepare the public for isolation and quarantine, public health measures that are not familiar to them. Efforts are needed to work with the media and other information sources to ensure that the public is aware of proper procedures to be followed should they become ill. Critical to the entire communication plan is the strengthening of the linkages between LINCS agencies and NJDHSS to maintain "one voice, one message." Key players in that communication link are the Health Educators/Risk Communicators in each LINCS agency.

The "public" is defined as the media, schools (nursery through graduate), employers, unions, elected officials and other policy makers, public information officers, transportation, commerce and tourism officials, and the general public as a whole.

Ideally, infection control should begin before a patient enters a HCF. Efforts are needed to work with the media and other information sources to ensure that the public is aware of proper procedures to be followed should they become ill. These include contacting their health care provider or the HCF before an encounter.

Messages for the public should emphasize preventive measures people can practice, particularly URP. Hand hygiene and containment of respiratory droplets by tissues or masks are essential activities that, in the absence of a SARS threat, may be best characterized as general protective behaviors for avoiding many infections, both common and exotic.

4. Mechanisms and Logistics for Communicating with the Public

Like CDC, the NJDHSS relies on its web site and the press for routine dissemination of public information. The Office of Communications, within the Office of the Commissioner, has lead responsibility for developing and approving material for the press and the public.

Comprehensive media contact lists for New Jersey, New York, Pennsylvania and Delaware are kept up to date.

The NJDHSS Office of Communications will conduct outreach to the public through LINCS agencies and LHDs, the media, and the NJDHSS web site with information on SARS that will help people minimize their risk and help control rumors. They will be provided with information about the outbreak, including surveillance efforts and findings, availability of vaccine and antiviral agents (should they be developed) and where to obtain additional information. The website will be updated at least daily. Media briefings and/or press releases may occur once or twice daily, ideally, at 10 am and/or 4 pm.

In light of recent crippling computer hacking incidents and the major power failure in the northeastern portion of the U.S. on August 14, 2003, contingency communications plans are being finalized to make continuous communication possible during a public health emergency. The NJDHSS Office of Communications staff have cell phones, portable personal computers and are purchasing "Blackberries" to maintain uninterruptible communications.

In collaboration with LHDs, printed items will be distributed to the public through pharmacies, primary care providers, and hospitals. These materials should include strong statements prohibiting discrimination against segments of the population that may be disproportionately afflicted with SARS.

In conjunction with LINCS agencies, NJDHSS staff will write op-ed articles for local papers/county websites and appear on cable access shows with consistent messages about public health surveillance, investigation, response and control.

a. Priority Activities for SARS are to:

- Develop key SARS messages for a wide range of audiences including physicians, hospital staff, local public health agencies, LINCS risk communication specialists and the media – prior to and during a SARS outbreak;
- Coordinate messages and release of information among state, region, county and local public health agencies;
- Prepare fact sheets, question-and-answer sheets and talking points to help answer frequently asked media questions;
- Identify appropriate spokespeople and coordinate media requests;
- Collaborate with CDC on their national public awareness campaign;
- Develop prototype materials for a traveling SARS information exhibit for each LINCS agency that can be used by county and local agencies and community organizations;
- Ensure the availability of SARS information in several languages;
- Develop a SARS "reference" guide (including a list of relevant websites) that can be used by all Public Information Officers in state, regional, county and local public health agencies, including hospitals;

- Develop and provide web-accessible materials on SARS; and
- Coordinate and maintain partnerships with:
  - Hospital public health information officers;
  - Local public health information officers;
  - Public information officers from other state agencies and states;
  - LINCS risk communications specialists; and
  - Federal communication specialists with CDC.

b. In the Event that the State EOC is Activated:

- The NJDHSS Office of Communications, in collaboration with the Governor's office, will coordinate the establishment of a centralized communications command center (Joint Information Center) in keeping with the provisions of the New Jersey Emergency Operations Plan, Emergency Support Function #13, Public Information Annex. This document should be available through each county's OEM.

- The NJDHSS Office of Communications will provide information through the Joint Information Center, State EOC, with input from the NJDHSS State Epidemiologist. Paramount to this communication effort is the provision of unified, consistent public health messages.

- The State OEM will work with the NJDHSS to establish phone banks and staffing to answer calls from the public.

- The NJDHSS Office of Communications, through the Joint Information Center, will continue to distribute information to the general public via press releases, public health alerts, web site postings and other tools. Materials will be translated into appropriate foreign languages, particularly if surveillance data indicate that certain ethnic groups appear to be at high risk. Their dissemination may require the assistance of other departments, as noted elsewhere in this document.

c. Special Populations

Special efforts to reach children, the disabled, mentally ill, elderly and non-native English speaking residents during an outbreak may be necessary to ensure that information is accessible and linguistically and culturally appropriate. Targeted messages may be delivered with assistance from the NJDHSS Office of Minority and Multicultural Health (OMMH) as well as non-health departments/agencies that have a history of involvement with outreach to special needs populations, including but not limited to: the Departments of Education, State, Human Services, Community Affairs, Corrections, and the Federal Bureau of Citizenship and Immigration Services (formerly the Immigration and Naturalization Service). In addition, because of the potential impact on business, travel and tourism, the Departments of Commerce and Transportation may be involved.

- NJDHSS is considering several programs to address the needs of special populations, such as geriatric, pediatric, school children, and travelers from countries or states where SARS is present. Substantial efforts will ensure that risk communications are tailored and accessible to the special populations in the state.

- NJDHSS and the NJ Department of Human Services (NJDHS) will provide support to the NJ Department of Education for school-based emergency planning to ensure that the needs of the schools regarding school safety and crisis management are met and students and their families are receiving appropriate assistance in coping with mental and psychosocial behaviors related to traumatic events. In addition, NJDHSS will provide schools with adequate technical assistance and other resources designed to support full development and execution of their comprehensive emergency and crisis management plans.

- The NJDHSS Office of Communications will partner with the NJDHSS OMMH to identify statewide organizations and community leaders in minority populations to develop and implement protocols for disseminating information, including translation services and community spokespeople. Likewise, the NJDHSS Office of Communications will partner with the NJDHSS OMMH and the Division of Aging and Community Services to develop and implement protocols for disseminating public health information to seniors and their families. On-going communication through the Area Agencies on Aging will be an important vehicle for enhancing this process.

- NJDHSS will partner with statewide organizations and community leaders to identify best methods for disseminating information, including translation services and community spokespeople for people with disabilities (TTY and Braille) and their families.

- Other non-traditional public health partners may include the military, funeral directors, medical examiners, large groups that use communal housing of individuals, and environmental resource specialists.

- Similarly, LINCS agencies should convene groups within their jurisdictions of special populations (e.g., minority, aging, disabled, non-English speaking) stakeholders to determine most effective methods to ensure channels of communication to the public and to determine the best methods for delivering information. Such activities must be integrated between the public health and hospital communities.

- The LINCS BT teams should identify and develop relationships with key stakeholders in the various special and minority populations to disseminate emergency messages in their jurisdictions. The BT teams will also convene

semi-annual trainings for special populations and minority groups regarding risk communication and communication dissemination.

- The NJDHSS web page will have links to SARS materials in languages other than English.

d. Legal Matters

NJDHSS will hold statewide training on legal issues related to bioterrorism with representatives from the Office of the Attorney General, the NJDHSS, Office of Legal and Regulatory Affairs and county and municipal counsel.

5. Mental Health Services

New Jersey's Division of Mental Health Services within the NJDHS is responsible for the state's mental health disaster plan, developed in 1989. Each county is also required to have a mental health disaster plan which is activated through the County Mental Health Disaster Coordinator. The system relies on a number of professional and volunteer mental health practitioners who provide "psychological first aid" to those affected by an unusual event. These providers respond to two different groups of individuals: the general public and first responders.

The NJDHSS Division of Health Emergency Preparedness and Response (HEPR) is responsible for the coordination of efforts in response to any event that will impact on the physical/psychological wellness of the population. NJDHSS is working with the NJDHS Division of Mental Health Services to formulate a strategy that will integrate a wide array of resources already providing services in the psychosocial area. This strategy, which is divided into Pre-Event, Event and Post-Event activities, will address identification, pre-crisis education, training, preparation, planning, service provision and evaluation.

a. Background

Lessons learned in the various national and international communities challenged with the SARS outbreak of 2002-2003 also identify significant economic and psycho-social disruption to SARS-affected communities. In addition, New Jersey's experience with the postal system anthrax attacks of 2001 and subsequent smallpox vaccination efforts suggests that there is a clear role for mental health support services along the continuum of Pre-Event, Event and Post-Event activities.

As a core concept of community crisis response, mental health support efforts are designed to leverage a sense of community cohesion in the wake of an event. In SARS-affected communities, public health and emergency response procedures such as isolation and quarantine, as well as the contagious nature of diseases, threaten community cohesion and further complicate the psycho-social impact of the event. In addition, the Asian (Taipei) experience in particular was remarkable for familial distress caused when families could not visit their ill loved ones in the hospital or say

"farewell", before death. Also complicating the mental health response was the delay of funerals and other rituals that hinged upon the release of the body to the family.

Addressing surge capacity issues at health care facilities is also an important aspect of anticipating and responding to the likely psycho-social consequences of a SARS event in New Jersey, as suggested by other incidents involving biohazards. It is also important to anticipate a demand for home-based mental health services and the likelihood that affected persons and communities may not be able to access traditional mental health care offered onsite at local mental health clinics, hospitals or private practice offices. Furthermore, due to in-home isolation or quarantine, members of the affected public may be best served remotely via tele-counseling and online resources.

The following outline addresses the key interface points for mental health resources, along with stage-specific tasks for mental health providers:

b. Pre-Event Activities

- Development of a collaborative network of mental health providers and a mechanism for deployment and real-time information sharing;

- Identification and training of frontline mental health responders who would be called upon if an event occurred, regarding basic SARS information, public health terminology, and Frequently Asked Questions (FAQ's);

- Training frontline medical personnel, including physicians, nurses, EMS and other medical personnel about typical and atypical mental health responses, strategies for managing fear and anxiety, and the availability of relevant mental health resources;

- Training and collaboration with providers on services to special populations, such as those serving children/schools, older adults, specific cultural and ethnic communities, people who are disenfranchised, first responders, business travelers, and others who are identified;

- Development of hardcopy brochures and other printed materials, as well as online resources available through state websites, to provide reliable information addressing the psycho-social consequences of SARS, as well as coping strategies and local mental health resources;

- Collaboration between mental health, public health and public information officials in the development of public information campaigns blending health care and mental health care information that may help reduce panic, a surge in health care seeking behaviors, and the potential for mass illness in the wake of a real-time event;

- Participation in sanctioned public health events (for example, previously held anthrax and smallpox clinics) to test and practice protocols for the integration of mental health services into the overarching public health response; and

- Ongoing dialog and networking with state and county health care, public health and emergency management officials in the furtherance of a mental health role in public health emergencies.

c. Event Activities

- Provision of training and orientation for those mental health professionals deployed to support SARS-related PHC response efforts (i.e.- mass prophylaxis sites, local hospitals, other hospital and health care facilities, etc.);

- Expansion of existing mental health Help-line services to 24 hour coverage and linkage with hotlines developed by NJDHSS, to provide tele-counseling to address SARS-related anxiety and to assist with the provision of updated resources and referrals for obtaining SARS information;

- Coordination with County Mental Health Administrators (MHA's) within SARS-impacted areas to activate and deploy the mental health workers from the county's crisis counselor call-up rosters;

- Provision of technical assistance to local mental health providers in adapting their response for special populations (i.e., children, older adults and ethnic communities, first responders);

- Provision of technical assistance to frontline public health care workers, such as physicians, nurses, medical technicians and others in anticipating and responding to epidemic-related mental health behaviors such as stress reactions and panic;

- Dissemination of psycho-educational materials addressing the mental health impact of the SARS event, as well as strategies for coping with fear and anxiety and the availability of mental health services to the different populations;

- Needs assessment and rapid identification of vulnerable populations and gaps in services that may exacerbate the psycho-social response to the event;

- Coordination with VOADs and faith-based organizations in unifying mental health messages and strategies;

- Coordination with public information officers and other officials in crafting public service mental health messages in support of the overall public health response to the SARS event;

- Recruitment of qualified outreach workers to provide community-based crisis counseling and psycho-education in rural and otherwise difficult to reach communities; and

- Delivery of specialized mental health support services to PHC professionals, and first responders to address stress management concerns to reduce the potential for adverse psychological reactions in the frontline public health workforces.

d. Post-Event Activities

- Maintenance of a telephone helpline providing tele-counseling, updated resources and facilitated referrals for services, as well as online resources;

- Delivery of debriefing and other post-event psychological services for first responders, and PHC professionals involved in the event;

- Participation in after-action meetings, operational debriefings, and the development of lessons-learned documents, to assess successes and areas that need improvement in the mental health response to the event;

- Crisis counseling and ongoing mental health support for those members of the affected public and PHC responder community who experience delayed onset or persistent stress reactions stemming from the SARS event; and

- Ongoing collaboration with health care, public health and emergency management agencies in planning, response, recovery and mitigation efforts.

V. Post-Event Recovery/Evaluation Reports

The NJDHSS Office of the State Epidemiologist will coordinate a department-wide initiative to assess the impact of the outbreak on PHC resources, and will prepare a report, including reports from the Infectious and Zoonotic Disease Program and the Vaccine Preventable Disease Program and other agencies such as the New Jersey Hospital Association and various state agencies (e.g., Departments of Commerce, Education, Transportation), for the Commissioner and Governor with recommendations for the future.

A. Command and Control

- Assessment of the implementation and enforcement of legal authority;
- Appraisal of the incident command system; and
- Recommendations to improve and enhance command and control activities during a future emerging infectious disease outbreak.

B. Surveillance and Epidemiologic Activities

1. Surveillance activities will return to the pre-outbreak phase.

2. After the surveillance indices describe outbreak containment, NJDHSS will evaluate surveillance and epidemiologic activities related to the SARS outbreak. The evaluation will include:
    - Description of activities, including surveillance activities and results; case-patient management, evaluation and clinical follow-up; contact management and follow-up; laboratory testing; resources used; and data management;
    - Description of what elements of surveillance and epidemiologic activities worked well;
    - Description of what elements of surveillance and epidemiologic activities were problematic; and
    - Recommendations to improve and enhance future surveillance and epidemiologic activities related to the surveillance and epidemiologic activities of an emerging infectious disease outbreak.

C. <u>Isolation and Infection Control in Health Care Facilities</u>

- Description of infection control guidance provided to PHCWs prior to and during the outbreak;
- Assessment of whether PHCWs felt they were adequately prepared during the outbreak;
- Description of exchanges that took place between NJDHSS and CDC, and between NJDHSS and PHCWs;
- Analysis of problems and issues related to infection control;
- Recommendations to improve and enhance future activities related to infection control during an emerging infectious disease outbreak; and
- Recommendations to improve and enhance future activities related to managing the clinical aspects of an emerging infectious disease outbreak.

D. <u>Community Containment</u>

- Debriefing of NJDHSS and PHCW staffs regarding the capacity and preparedness of staff working to treat case-patients, track contacts, and contain the outbreak;
- Decontamination of isolation and mass quarantine facilities conducted by commercial firms and coordinated by the LINCS agencies following procedures established by the CDC;
- Assessment of the isolation and quarantine protocol implementation as well as the mass prophylaxis procedures (if appropriate);
- Coordination of recovery efforts, damage assessment and needs assessment by the OEM, both state and local; and
- The NJDHSS Office of Emergency Health Care Services assessment of the state's ability to resume normal provision of emergency medical services.

E. <u>International Travel</u>

- Description of screening and monitoring of incoming travelers from SARS-affected areas;
- Description of guidance given to travelers to SARS-affected areas outside the US;
- Description of evaluation and management of SARS cases and potentially exposed passengers and crew members on airplanes and ships;

- If SARS occurred in the U.S., description of screening of outbound travelers to prevent SARS exportation; and
- Recommendations to improve and enhance activities related to travel transmission.

F. Laboratory Services

- Description of activities, including assessment of personnel resources; specimen receipt, handling and transport (as needed); laboratory testing capacity; purchasing support; and interagency coordination (including communication with NJDHSS' CDS and CDC);
- Description of what elements of laboratory activities worked well;
- Description of what elements of laboratory activities were problematic; and
- Recommendations to improve and enhance future laboratory activities related to the laboratory aspects of an emerging infectious disease outbreak.

G. Communication

- Description of public information activities which took place prior to and during the outbreak;
- Assessment of whether PHCWs felt they received timely updates during the outbreak;
- Assessment of the strengths and limitations of the communications activities during the outbreak; and
- Recommendations to improve and enhance future activities related to communication with the public during an emerging infectious disease outbreak.

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DHSS organizations represented in the planning process include:

Division of Health Emergency Preparedness and Response
Division of Local Public Health Practice and Regional Systems Development
Health Care Quality and Oversight
Long Term Care Systems
Office of Communications
Office of Emergency Healthcare Services
Office of Information Technology Services
Office of Minority and Multicultural Health
Public Health and Environmental Labs

New Jersey-based organizations represented in the planning process include:

Association of Professionals in Infection Control (North, South)
Health Care Association of New Jersey
Home Health Assembly of New Jersey
Infectious Disease Society of New Jersey
Medical Emergency & Disaster Prevention & Response Expert Panel (MEDPREP)
New Jersey Association of Local Boards of Health
New Jersey Association of Non-Profit Homes for the Aged
New Jersey Association of Paramedic Programs
New Jersey Association of Public Health Nurse Administrators
New Jersey College Health Association
New Jersey Department of Corrections
New Jersey Department of Education
New Jersey Department of Health and Senior Services - Regional Planners
New Jersey Department of Human Services
New Jersey Department of Law and Public Safety
New Jersey Department of Military and Veterans Affairs
New Jersey Department of State
New Jersey Department of Transportation
New Jersey Health Officers Association
New Jersey Hospital Association
New Jersey LINCS Epidemiologists
New Jersey Local Health Departments

New Jersey Medical Examiner's Office
New Jersey Pharmacists Association
New Jersey Primary Care Association
New Jersey Public Health Council
New Jersey Society for Public Health Education
New Jersey State College Health Association
New Jersey State First Aid Council
New Jersey State League of Municipalities
New Jersey State Police
University of Medicine and Dentistry of New Jersey Center for BioDefense
University of Medicine and Dentistry of New Jersey School of Public Health